United States Department of Agriculture
Rural Utilities Service

ENVIRONMENTAL ASSESSMENT for

COLUMBIA POWER COOPERATIVE ASSOCIATION TRANSMISSION LINE UPGRADE

PILOT ROCK TO UKIAH – UMATILLA COUNTY, OREGON

ENVIRONMENTAL ASSESSMENT

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ACRONYMS AND ABBREVIATIONS

APP	Avian Protection Plan
ACSR	Aluminum Conductor Steel Reinforced
ATV	All-Terrain Vehicle
BGEPA	Bald and Golden Eagle Protection Act
BPA	Bonneville Power Administration
CPCA	Columbia Power Cooperative Association
EFU	Exclusive Farm Use
ELS	Ecological Land Services, Inc.
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FR	Forestry Residential
G/F	Grazing/Farming
MBTA	Migratory Bird Treaty Act
NESC	National Electric Safety Code
NRHP	National Register of Historic Places
ODEQ	Oregon Department of Environmental Quality
ODFW	Oregon Department of Fish and Wildlife
OHWM	Ordinary High Water Mark
PP&L	Pacific Power & Light
ROW	Right-of-way
USFWS	U.S. Fish and Wildlife Service

1.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

1.1 PROJECT DESCRIPTION

The project consists of upgrading a 27-mile transmission line segment located in north central Oregon between the towns of Pilot Rock and Ukiah in Umatilla County, Oregon.

The landscape can briefly be described as semi-arid, moderately high elevation composed mostly of grazing land; however, some land parcels are irrigated and scattered pine forests are also found in the area. The weather includes substantial temperature variations and significant wind. The area is classified as a medium load district in the National Electrical Safety Code (NESC).

1.1.1 Existing Segments to be Upgraded

The existing transmission line segment is a radial line serving the Columbia Power Cooperative Association (CPCA) Ukiah Substation. The existing lines are insulated for 69KV phase-to-phase operating voltage with a conductor of #1/0 ACSR (aluminum conductor steel reinforced). The structures consist of both single pole wood framed cross-arm construction, and two-pole "H" – frame structures. The average pole height for the existing line is 55 feet. The conductor is carried on porcelain suspension insulators. The average span between supports is about 600 feet. An outage of the line will mean an outage to the Ukiah substation and the at least 900 customers and potentially 1,750 customers. The existing lines are about 55 years old and are nearing the end of their useful lives.

For the most part, the right-of-way (ROW) for the existing lines is secured by "blanket easements" from individual landowners. The ROW boundaries are not delineated. In the timbered areas, the ROW is cleared approximately 40 to 50 feet on each side of the transmission centerline. In the grazing areas, the ROW is not cleared because the low-lying vegetation poses no risk to the poles or wires.

1.1.2 Proposed Transmission Line Upgrade

The new, upgraded lines will generally follow the same route/corridor as the existing line and will likely utilize existing easement and permits. The structures for the upgraded line will likely be wood, although fiberglass and glue-laminated poles will be considered upon RUS approval. A typical structure will be a single pole about 60 – 65 feet in length. It is possible the new upgraded line will be about five feet higher than the existing line. The average span will likely be around 500 feet. A new 397.5 KCM ACSR conductor of larger diameter will be used in place of the existing #1/0 ACSR. The conductor will be carried on 69KV polymer horizontal post or horizontal "V" insulators. The polymer insulators are highly resistant to gunshots and will also reduce wind caused "conductor blow-out" when compared to the existing line. This is due to the replacement of the existing suspension insulators (that can swing in the wind) with the more rigid polymer insulators. While ROW width (at this time) has not been calculated, the new lines will require roughly the same amount of ROW as the existing lines. A minimum ROW width

would be approximately 60 feet (with the provision for removal of "danger trees" that could fall into the line). An overhead ground wire for lightning protection will be carried above the phase conductors for the first half mile out of each substation.

The new line will be insulated for 69KV, and energized at 69KV. The transmission line segment is part of a fringe area transmission system operated by Pacific Power & Light (PP&L).

1.1.3 Proposed Access Routes

Part of the project is to secure reasonable access routes to line supporting structures. Many of the existing structures do not have road access; therefore, materials have to be brought in by helicopter or all-terrain vehicle (ATV). A ROW agent will negotiate with individual landowners to find access routes to structures where possible.

1.1.4 Parallel Utilities, Roads and Corridors

All-weather roads parallel most of the Pilot Rock – Ukiah transmission line corridor. From Ukiah to Albee, the road closely parallels the transmission line and it is desirable to access poles from the County road. Between Albee and Yellow Jacket Road, the transmission line and road become separated. Although somewhat distant, the transmission line is generally parallel to the Yellow Jacket Road. No other corridors or utilities are found to be parallel to the Pilot Rock – Ukiah line.

1.1.5 Construction, Clearing and Maintenance

Since the transmission line segment is radial, the removal of an existing line before construction of a new line would result in an outage for the substation(s) served by the line. It is possible during certain times of the year to secure an outage to the Pilot Rock – Ukiah line segment by serving the Ukiah Substation load from the Spray Substation distribution feeder.

In general, the preferred construction is to build the new line adjacent to the existing line, cutover to the new line and then remove the old line. If this is not possible, then alternative methods will be developed to maintain service continuity while the old line is replaced. An alternative method would be to install temporary diesel generation near a substation to be taken out of service. The diesel generation would then pick up the substation load. This alternative is extremely expensive due to high fuel costs and contributes to air pollution; therefore, temporary diesel generation is considered a last resort.

Much of the existing ROW consists of open grazing lands; however, there are timbered areas where the existing ROW is cleared. In the timbered areas, it is not known (at this time) exactly how much additional ROW must be cleared. This is dependent upon negotiations with landowners and detail line design. Any ROW clearing will be performed in accordance to the terms negotiated between the ROW agent and the

landowner. The pine trees in this area are relatively slow growing and will only require infrequent tree trimming to maintain the ROW.

Maintenance activities will consist of an annual line patrol and possibly hardware, insulator, and/or conductor replacement/repair due to storm damage or vandalism. Typical line patrol will be conducted using an ATV. Due to a lack of road access, many poles will have to be climbed without the aid of a man-lift to access insulators and other line components.

1.2 NEED FOR THE PROJECT

The Pilot Rock – Ukiah transmission segment were constructed in the early 1950s. Most of the 55-year-old structures and nearly all the conductor are original and this segment will likely reach the end of its useful life in the next ten years. It operates in an environment of greatly varying temperatures and substantial winds at an altitude of over 3,000 feet. Due to this environment, there is some question regarding the mechanical integrity of the existing #1/0 ACSR conductor.

It is reasonable to assume that the overall reliability of the CPCA system will be substantially reduced through the continued operation of the existing transmission line segment.

Upgrading the Pilot Rock – Ukiah transmission segment will require a larger diameter conductor to improve mechanical strength and to reduce line losses. A 397.5KCM ACSR conductor has been specified since it is large enough in diameter to provide mechanical strength and it is the same size conductor specified in the near by transmission line segments that have been previously upgraded. In addition, the larger conductor will reduce line losses and improve voltage regulation to the CPCA substations.

BPA supports the upgrade of this transmission line segment based upon to the efficiency and reliability improvements.

1.3 ALTERNATIVES CONSIDERED TO THE TRANSMISSION LINE UPGRADE PROJECT

The alternative considered to the proposed action is to construct a new transmission facility in a new corridor. The first alternative route is to build a transmission line along U.S. Highway 395 from Pilot Rock to the intersection of U.S. Highway 395 and State Highway 244, then east along State Highway 244 about one mile to Ukiah. The advantage of this alternative route is the easy, year around access to the transmission line structures. A “No Action” alternative is also considered.

1.4 ALTERNATIVE CONSIDERED AND DISMISSED

1.4.1 Feed Ukiah Substation from Another Source

The town of Long Creek is about 25 miles from Ukiah. Long Creek is served by Oregon Trail Electric Cooperative from a 34.5KV distribution line. The 34.5KV distribution line terminates at a substation 30 miles further away from Long Creek. This makes the next nearest transmission line route (from the south) approximately 55 miles long. Feeding Ukiah from another source is not practical at this time.

1.4.2 Develop and Alternate Generation Resource

An alternate generation resource developed in the Ukiah area could alleviate or eliminate the need for the transmission line upgrade. An examination of the area has resulted in the following: There is no identifiable generation resource in the local area that can produce energy at a cost comparable to the current and projected BPA "priority firm" rate. Even if a low cost generation resource could be developed, there would still be the need for transmitting the energy to Ukiah (a distance in excess of 50 miles). Power transmission at 69KV or a higher voltage would likely be required; therefore, this alternative would offer no net benefit.

1.4.3 Utilize Load Management Techniques

CPCA has aggressively pursued several conservation measures within its system. As a result of the conservation measures, individual customer consumption has decreased. Conservation and load management may provide line loss savings; however, conservation and load management cannot increase reliability. Reliability is related to the ability of the line to withstand the effects of weather and other natural events. The upgraded lines will be designed to be more reliable than the existing lines. Re-conductoring of the lines will also increase efficiency and reduce losses – a good application to obtain energy efficiency.

1.4.4 Construct Underground Transmission

Relatively low cost solid dielectric 69KV underground cables can be obtained (as compared to oil filled or gas insulated cables); however, the cable cost alone is several times more expensive than overhead conductors of the same rating. Trenching would likely cost an extra ten dollars per foot on average, concrete termination boxes would be needed and finally, the addition of shunt reactors would likely be required to offset the high cable capacitance. The capacitance current in the cable sheath would be considerable (at the distances involved). The excessive sheath current would decrease the current carrying capability of the cable. In all, underground construction would likely be five to ten times more costly than the upgraded overhead line.

Another underground transmission method is HVDC Light. This method uses a converter station at the source terminal to convert from AC to DC and then a converter station at the receiving end terminal to convert from DC to AC. HVDC Light would eliminate the negative effects of capacitance, but would require expensive converter stations. In this situation, the HVDC Light conductor and underground construction

would be comparable to the cost of AC underground transmission (above); however, the converter stations would substantially increase overall costs as compared to AC underground transmission.

1.4.5 A Combination of Underground and Overhead Construction

It is possible to construct a portion of the line underground to avoid an environmental impact (such as a visual impact). At this time, there is no known environmental impact that would justify the high cost of underground construction for any specific portion of the line routes.

1.4.6 Alternative Structure Configurations

The current lines are a mix of single pole, cross arm construction with suspension insulators and two pole "H-frame construction with suspension insulators.

Alternatives being investigated are: (1) single wood pole armless construction with either polymer line post insulators or horizontal "V" polymer insulators; (2) single fiberglass pole armless construction with either polymer line post insulators or horizontal "V" insulators; and (3) single laminated wood pole armless construction with either polymer line post or horizontal "V" insulators.

1.4.7 No Action

A No Action alternative would not increase transmission efficiency or reliability for the segments under consideration. Further, a No Action alternative would increase the potential for the present line to be a public hazard. In particular, a broken conductor could start a fire, which could result in considerable damage.

Under the No Action alternative, the existing line would eventually undergo a very large maintenance expense in replacing both poles and conductor, but would not receive any considerable benefit in reliability, efficiency or capacity.

2.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

2.1 LAND USE

2.1.1 Alternative A -Proposed Action

The existing and proposed transmission corridor stretches from the outskirts of the City of Ukiah on the south to the outskirts of the City of Pilot Rock on the north. Generally following county roads through the lower portions of various drainages, adjacent uses tend to be devoted to resource uses such as cultivated agriculture fields and open range livestock grazing. Scattered rural residences can be found along the route. The central portion of the corridor is a more overland route that transects areas used primarily for forestry production including approximately one mile through the Umatilla National Forest. Umatilla County zoning though the corridor consists of Exclusive Farm Use (EFU) or Grazing/Farm (G/F) districts. Where the transmission line traverses forested areas, the corridor has been cleared of danger trees to protect the line from falling timber;

the cleared corridor is 60 feet wide. In other areas, the ROW has not been delineated and the existing vegetation poses no danger to the line. The line covers approximately 24 miles of rangeland covering approximately 175 acres. The line passes through approximately 2.1 miles of forested land covering approximately 15 acres, and it passes through approximately 1 mile of cultivated farmland covering approximately 7 acres.

Utility facility service lines and maintenance or minor betterment of existing transmission lines and facilities of utility companies and agencies are identified in Umatilla County Development Code 152.056 I and J as permitted uses in the EFU zoning district. Within the G/F zone, the Umatilla County Development Code 152.083 I lists the maintenance or minor betterment of existing transmission lines and facilities of utility companies and agencies as requiring a zoning permit, which is a ministerial decision by the Planning Director. The existing corridor and transmission line corridor traverses numerous polygons of mapped prime farmland; however, field observations indicate that the land within the ROW continues to have ongoing agricultural activities.

2.1.2 Alternative B – U.S. Highway 395 Corridor

Umatilla County is largely a rural county dominated by agricultural activities and other resource uses, land uses adjacent to the approximately 31 mile corridor for Alternative B also are devoted to cultivated fields, open range livestock grazing and forestry with few residences scattered along the route. Zoning through this corridor is G/F Zone for about the southern half, EFU Zone for the northern half and a small portion of Forestry Residential (FR) at the Battle Mountain Forest State Scenic Corridor. This corridor appears to cross numerous polygons of mapped prime farmland and prime forestland. Construction of a new transmission line through the FR zone would require a conditional use permit per Umatilla County Development Code 152.217 F.

2.1.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Land uses and regulatory requirements in the corridor are discussed above in Section 2.1.1.

2.2 FLOODPLAINS

2.2.1 Alternative A - Proposed Action

In the vicinity of the existing Ukiah to Pilot Rock transmission corridor, which is the proposed upgrade corridor, the Federal Emergency Management Agency (FEMA) has mapped regulatory floodplains along the east and west forks of Birch Creek within the city limits of Pilot Rock and along the stream corridors of East Birch Creek south of the city and Birch Creek north of the city. In and near Ukiah, FEMA has mapped the regulatory floodplain along Camas Creek west and south of the city, through the city, and continuing northeasterly within Umatilla County. No other floodplains have been mapped by FEMA within or near the corridor (Flood Insurance Rate Maps (FIRM) Panels 410204 1350B, 410204 1750B, 410204 1325 B, 410204 1550 A, and 410204 1575 A). The existing corridor is outside of these mapped floodplains.

2.2.2 Alternative B - U.S. Highway 395 Corridor

FEMA has not mapped any regulatory floodplains within the Alternative B transmission corridor (FIRM Panels 410204 1350 B, 410204 1325 B, 410204 1575 B, and 410204 1750 B).

2.2.3 Alternative C - No Action

Mapped regulatory floodplains within the current corridor are as described in 2.2.1 above.

2.3 WETLANDS

2.3.1 Alternative A - Proposed Action

The landscape associated with the electrical transmission line corridor consists mainly of rolling hills and moderately high elevations. The weather includes substantial temperature variations, significant winds and arid conditions.

The northern portion of the Pilot Rock to Ukiah segment consists mainly of agricultural land and open range. Birch Creek follows the line for approximately 4.5 miles, spanning the creek periodically. The southern portion of the segment contains the Umatilla National Forest and some open rangeland.

Wetlands within the existing corridor are primarily associated with the streams that are in the area and provide sufficient water during the growing season to support hydrophytic vegetation. Wetlands are also located within or adjacent to the numerous man-made ponds used for livestock watering. Wetlands associated with these man-made features may or may not be jurisdictional under local, state and federal regulations. In all instances, the existing transmission poles are located either in the existing ROW of roads, or span the streams and wetlands entirely.

2.3.2 Alternative B - U.S. Highway 395 Corridor

The description of the affected environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B would cause permanent impacts due to creating and maintaining a new ROW rather than utilizing an existing maintained ROW easement for the proposed action.

Lower Rugg Spring and Casteel Spring are located adjacent to the northern portion of the Pilot Rock to Ukiah segment crossing the segment periodically. Alexander Creek is located near or adjacent to the center of the segment, crossing periodically. Snipe Creek and Owens Creek are located adjacent to the segment in the southern portion of the segment.

Other seasonal streams and wetlands are located adjacent to the alternative segments. Alternative B would cause permanent impacts due to lack of an existing maintained ROW easements.

2.3.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.4 WILDLIFE RESOURCES

2.4.1 Alternative A - Proposed Action

2.4.1.1 Wildlife Habitat

Wildlife habitat associated with the transmission line corridor consists of open grazing land and coniferous forests with some agriculture land. A small amount of the surrounding area contains shrub-steppe habitat. Portions of the transmission line corridor are located adjacent to or within riparian areas associated with streams. The Proposed Action would replace poles that are located within the existing maintained transmission corridor easement.

2.4.1.2 Mammals

Large mammal species that could be expected to occur within the general vicinity of transmission line corridor include mountain lion (*Felix concolor*), bobcat (*Lynx rufus)*, Rocky Mountain elk (*Cervus canadensis nelsoni*), and American black bear (*Euarctos americanus*). Numerous mule deer (*Odocoileus hemionus*) were observed by during environmental survey work.

Small mammals that could be expected to occur in the project vicinity are coyote (*Canis latrans*), badger (*Taxide taxus*), striped skunk (*Mephitis mephitis*), various hares, rabbits, ground squirrels, chipmunks, rats and mice.

2.4.1.3 Birds

Non-migratory birds expected to occur in the project vicinity are chukar (*Alectoris chukar*) – an introduced game species, ring-necked pheasant (*Phasianus colchicus*), wild turkey (*Meleagris gallopavo*) and ruffed grouse (*Bonasa umbellus*). The later three species were observed during environmental survey work along the corridor. Birds of prey and migratory birds are expected to forage, perch and nest within and adjacent to the project area. Below is a list of birds observed during environmental survey work periods:

Table 1. Birds Observed.

American goldfinch (*Carduelis tristis*)	**Black-capped chickadee** (*Poecile atricapilla*)
American robin (*Turdus migratorius*)	**Northern harrier** (*Circus cyaneus*)
Northern flicker (*Colaptes auratus*)	**Great blue heron** (*Ardea Herodias*)

Common raven (*Corvus corax*)	**Steller's jay** (*Cyanocitta stelleriius*)
Black-billed magpie *(Pica hudsonia*)	**Dark-eyed junco** (*Junco hyemalis*)
Ruffed grouse (*Bonasu umbellus*)	**American kestrel** (*Falco sparverius*)
Ring-necked pheasant (*Phasianus colchicus*)	

2.4.2 Alternative B - U.S. Highway 395 Corridor

The description of the affected environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B would cause permanent impacts due to creating and maintaining a new ROW rather than utilizing an existing maintained ROW easement for the proposed action.

2.4.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.5 VEGETATION RESOURCES

2.5.1 Alternative A - Proposed Action

The northern portion of the transmission corridor consists of open grazing land and agriculture land. The open grazing land consists of an herbaceous grasses and forbes with scattered native shrubs. The southern portion of the segment includes the Umatilla National Forest with some open rangeland and cultivated farmland near Ukiah. The portion of the forest within the corridor is dominated by larch, Douglas fir, ponderosa pine, and grand fir and a sparse under story consisting mainly of grasses, forbes and scattered shrubs. The total amount of open grazing land within the corridor is approximately 175 acres, the total amount of forested land is approximately 15 acres and the total amount of agricultural land within the corridor is approximately 7 acres.

2.5.2 Alternative B - U.S. Highway 395 Corridor

The description of the affected environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B would cause permanent impacts due creating and maintaining a new ROW rather than utilizing an existing maintained ROW easement for the proposed action.

2.5.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.6 THREATENED AND ENDANGERED SPECIES

2.6.1 Alternative A - Proposed Action

According to the U.S. Fish and Wildlife Service (USFWS), the only threatened or endangered species that may occur in Umatilla County are steelhead, sockeye and chinook salmon and bull trout (USFWS 2007).

2.6.1.1 Bald Eagle

Although bald eagles have been delisted by USFWS, they are still protected under the Bald and Golden Eagle Protection Act (BGEPA) and the Migratory Bird Treaty Act (MBTA). Bald eagles may forage in fish bearing streams within and adjacent to the transmission line corridor. The eagles may also fly within the project area to travel from one foraging or nesting site to another. To assure the protection of all migratory birds including birds of prey, the CPCA will follow the guidelines in Suggested Practices for Avian Protection On power Lines: The State of the Art in 2006 and the APP Guidelines prepared by the Edison Electric Institute's Avian Power Line Interaction Committee and USFWS (Edison 2005) by spacing conductors at least 7.5 feet apart.

2.6.1.2 Fish

USFWS lists the following threatened and endangered fish species that may occur within Umatilla County: Snake River Basin, middle Columbia River, and upper Columbia River steelhead; Snake River sockeye; Snake River and upper Columbia River chinook salmon; and Columbia River Basin bull trout. USFWS lists the following threatened and endangered Critical Habitat that may occur within Umatilla County: Snake River sockeye and chinook salmon; and Columbia River Basin bull trout. USFWS currently has no species listed as proposed within Umatilla County.

The transmission line follows Birch Creek for approximately 4.5 miles, spanning the creek periodically. According to ODFW, middle Columbia River steelhead and other resident fish exist within the 4.5-mile stretch of Birch Creek that runs adjacent to or near the transmission line (Duke 2008). Direct impacts to the middle Columbia River steelhead will be avoided to the fullest extent possible by: 1) working during the approved in-water work window provided by ODFW; 2) replacing all poles upland of the ordinary high water mark (OHWM); and 3) installing erosion control measures such as silt fencing or straw bales around the disturbed area during construction and re-vegetating the disturbance area to stabilize the exposed soil.

2.6.1.3 Plants

According to USFWS, no threatened or endangered plant species occur in Umatilla County.

2.6.2 Alternative B - U.S. Highway 395 Corridor

The description of the affected environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B would cause permanent impacts due

creating and maintaining a new ROW rather than utilizing an existing maintained ROW easement for the proposed action.

2.6.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.7 CULTURAL RESOURCES

2.7.1 Alternative A - Proposed Action

Approximately 36.7 (22.8 mi) of the 43.5 km (27 mi) long transmission line easement was surveyed by Archaeological Investigations Northwest (AINW). Two archaeological isolates and three historic resources were recorded either within the survey area or close to the boundaries of the survey area. Archaeological site 07/1553-P3 and isolate 07/1553-P4 are recommended to be not eligible for listing on the National Register of Historic Places (NRHP), and no additional work is recommended for them. Archaeological site 07/1553-P2 is potentially eligible for listing in the NRHP. It is recommended that impacts to the site be avoided by planned upgrades to the transmission line. The Columbia Power Cooperative Association Transmission Line was recorded as a historic resource and it appears to be eligible for listing on the NRHP. Replacement of the transmission line may not constitute an adverse effect since it is not eligible for its architectural or engineering characteristics. Both the Albee Town Site and the Ukiah Cemetery potentially could be eligible for listing on the NRHP, and impacts to these properties will be avoided by the planned improvements to the transmission lines.

2.7.2 Alternative B – U.S. Highway 385 Corridor

No survey of this corridor was conducted and the number and nature of potential cultural resources is unknown.

2.7.3 Alternative C – No Action

Existing conditions relative to cultural resources under this alternative are as described in Section 2.7.1 above.

2.8 AIR QUALITY

2.8.1 Alternative A - Proposed Action

The Umatilla Comprehensive Plan Technical Study on air, land and water quality states that the air quality within the County generally is good. The Oregon Department of Environmental Quality (ODEQ) has no data specific to the immediate vicinity of the transmission corridor. The *2006 Oregon Air Quality Data Summaries* showed that Pendleton, the nearest city where air quality data is collected, had 312 good air quality days and 47 moderate air quality days (ODEQ 2006). Conversations with ODEQ indicate that the rural nature of the project area has few sources that produce air pollutants on a regular basis (Hough 2008). Potential sources would include particulates

during wintertime atmospheric inversions when wood stoves are frequently the source of heat for rural residences, in spring and fall with wind-generated dust from cultivation and harvest, and in the summer and fall from smoke from forest fires.

2.8.2 Alternative B - U.S. Highway 395 Corridor

Air quality conditions in the Alternative B corridor are similar to those in the Proposed Action corridor.

2.8.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.9 WATER QUALITY

2.9.1 Alternative A - Proposed Action

Surface water resources within the existing corridor are limited to a few small to medium streams as well as small man-made livestock watering ponds within area used as rangeland. From north to south, the existing line crosses or is in close proximity to the following streams:

- West Birch Creek
- Bridge Creek
- Bear Creek
- Owens Creek

Numerous other small seasonal streams and drainages are located throughout the corridor including agricultural ditches and roadside ditches. Some of these drainage features have been dammed with earth and excavated to create watering holes for livestock. It is generally assumed that portions of these streams are presently impacted by livestock including erosion, reduction of riparian vegetation, and manure entering the waterways. On-site septic systems are not likely a major source of potential contamination into surface waters due to the low residential density in the area. No major lakes, reservoirs or rivers are located within or adjacent to the existing corridor.

Ground water resources within the vicinity of the existing corridor include both shallow aquifers in alluvial formations and deeper regional aquifers within fractured basalt formations. Alluvial aquifers are generally restricted to valley floors and may have highly variable ground water table elevations. Seasonal and perennial springs are present along valley walls acting as the main source of water for the streams in the area. Some of these springs have been developed into livestock watering ponds with some of the bigger springs likely used for domestic water purposes. Deep-seated aquifers within fractured basalt are likely used by residents for domestic and agricultural uses. These aquifers are generally quite large and contain vast reserves of water. With the sparse residential population within the line corridor, it is likely that these deep-seated aquifers are not

presently threatened by over use. Aquifers in the area are not expected to be contaminated to any great extent.

2.9.2 Alternative B - U.S. Highway 395 Corridor

Alternative B would be located to the west of the existing line corridor generally following State Highway 395 from Pilot Rock to Ukiah. In general terms, this route is much the same as the existing corridor with respect to number and physical characteristics of surface waters. Groundwater sources and quality are likely to be the same as in Alternative B.

2.9.3 Alternative C - No Action

Same as Alternative A.

2.10 AESTHETICS

2.10.1 Alternative A - Proposed Action

The existing transmission lines were originally constructed in the 1950s. From Ukiah it follows the Ukiah Albee Road north through the Albee area where it transitions to the John Day Road and starts climbing in elevation as it go through a small portion of the Umatilla National Forest following a primitive road. It continues north from the National Forest going across the countryside, but visible from other primitive roads until it drops into the Bridge Creek Canyon where it generally runs along the toe of the western slope parallel to Yellow Jacket Road. The line crosses Highway 395 south and west of Pilot Rock where it again climbs and follows the edge of the hillside to its terminus at the substation. The segments nearest the two cities are the most visible although the line remains visible where it follows the large County roads. Segments in the more remote areas where the vegetation is denser are obviously less visible by the general public. No formally identified scenic areas are identified on or near the existing corridor.

2.10.2 Alternative B - U.S. Highway 395 Corridor

This route would result in a new corridor and facility starting at the existing substation in Ukiah and following Highway 244 for approximately one mile where it would turn north and follow Highway 395 passing through the Battle Mountain Forest Scenic Corridor, continuing north through Whittaker Flats and eventually turning east through the Jack Canyon before intersecting with Yellow Jacket Road and following the proposed route to the substation.

The southern third of this route consists of high-desert rangeland with sparse, low-growing vegetation and scattered residences. The stretch through the Battle Mountain Forest area is heavily forested. From there, the road climbs in elevation and continues across more high-desert rangeland to Pilot Rock.

2.10.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.11 TRANSPORTATION

2.11.1 Alternative A - Proposed Action

Where the existing corridor follows local or state roads or highways, the transmission line utility poles are setback from the ROW, except for those instances when the lines cross the roads. Obviously, in these circumstances the lines are elevated well above the road surface.

Traffic generated by the facility is limited to that necessary for routine inspections and maintenance, or repairs required by damage from storms, vandalism or fire.

No airports exist near the existing corridor.

2.11.2 Alternative B - U.S. Highway 395 Corridor

The corridor contemplated under this alternative would parallel a federal highway ROW for virtually the entire length. The utility poles would be setback from the ROW.

No airports exist near this alternative corridor.

2.11.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.12 NOISE, RADIO AND TELEVISION INTERFERENCE

2.12.1 Alternative A - Proposed Action

Low-level noise can be detected from a transmission line when the energized line encounters misty/foggy weather conditions. This is a result of the electric field intensity near the conductor. In dry weather, there is no easily detectable noise observed from a transmission line.

The existing transmission line supports the conductor primarily with porcelain suspension insulators. Suspension insulators carrying lightweight conductor (as with the existing line) can be prone to sparking across the insulator connections and this can result in radio interference across a wide spectrum of frequencies. However, it is not known if this type of interference occurs with the existing facilities.

The maximum current carried by this line is quite small (approximately 40 – 50 amps). The magnetic field is proportional to the current in the conductor (spacing and distance factors not considered). Many local distribution lines carry equal or higher currents. The

impact of this line due to a magnetic field is negligible as compared to other local electric circuits.

The line however generates an electric field that is quite strong at the conductor (39KV). Voltages can be induced in metallic objects in close vicinity of this line. In dry weather, barbwire fences, metallic gates on wood posts and other ungrounded objects can potentially be induced with voltage.

2.12.2 Alternative B - U.S. Highway 395 Corridor

There are no electrical transmission facilities in this alternative corridor.

2.12.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.13 HUMAN HEALTH AND SAFETY

2.13.1 Alternative A - Proposed Action

Transmission lines, like electrical wiring, can cause serious electrical shocks if certain precautions are not taken. These precautions include building the lines to minimize the shock hazard. All CPCA lines are designed and constructed in according with the NESC. NESC specifies the minimum allowable distance between the lines and the ground or other objects. These requirements basically determine the edge of the ROW and height of the line, i.e., the closest point that houses, other structures, and vehicles are allowed to the line, to limit electrical field effects to acceptable levels.

As discussed in 2.12, power lines can also induce voltage into objects near the lines. This effect can lead to nuisance shock, if a voltage is induced on such things as fencing that may be insulated from the ground. Usually, this becomes a problem only with lines with voltages above 230KV, and is not likely to occur with this project. As discussed further in that section, should problems occur with this line, simple grounding techniques should remedy the situation.

Everything electrical, including power lines, household wiring and appliances produce electrical and magnetic fields (EMF). Movement of electrons in a wire (current) produces magnetic fields and electrical pressure (voltage) produces electrical fields. Both fields are reduced in strength with increasing distance.

The table below shows the typical magnetic field density produced by the existing transmission line.

Table 2. Computed Magnetic Field Density Under the Existing Transmission Line.

Parameters: Pole Height 50 ft.
Spacing delta, 9 ft.
Line current 40 amps
Magnetic field density in milligauss at three feet above ground

Dist. From center line (ft.)	-45	-30	0	30	45
Magnetic field density	.63	.96	1.67	.96	.63

Note: The average magnetic field density in a residential home is approximately 1.1 milligauss (from the World Health Organization).

2.13.2 Alternative B - U.S. Highway 395 Corridor

The Alternative B corridor is contemplated as being sufficiently separated from roads and private improvements. The corridor along Highway 395 is only sparsely developed.

2.13.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

2.14 SOCIOECONOMIC AND COMMUNITY RESOURCES

2.14.1 Alternative A - Proposed Action

The U.S. Census Bureau estimates the 2006 population for Umatilla County at 72,928 total persons (USCB 2006). Of that number, 63,663 were white, 9 were black or African American, 3,353 were Native Indian and Alaska Native, 552 were Asian, 2,657 were some other race, 2,694 were two or more races, and 13,389 were Hispanic or Latino (of any race).

In 2005, there were 1,578 non-farm establishments and 21,132 private, non-farm employees in the County, with a 5.9 growth rate in nonfarm employment since 2000. Median household income in Umatilla County in 2004 was $38,388 compared to $42,568 for the state. In 2004, 14.9 percent of the population was below poverty level compared to 12.9 percent for the state. Almost 78 percent of residents over 25 in the year 2000 were high school graduates and 16 percent held a bachelors degree, compared to 85.1 and 25.1 percent, respectively, for the state.

Wholesale trade sales in 2002 for the County were over $300 million and retail sale were over $600 million. Retail sales per capita were $8,379. There were 175 building permits issued in 2006.

The City of Ukiah estimated population was 255 total persons (USCB 2006). Seven people were identified as Asian, 3 as some other race, 2 as two or more races, and 4 as Hispanic or Latino (of any race).

Pilot Rock's Census Bureau estimated total population for 2006 was 1,532 (USCB 2006). Of these, 1,442 were identified as white, 4 were black or African American, 41 were American Indian and Alaska Native, 4 were Asian, 10 were some other race, 23 were two or more races and 23 were Hispanic or Latino (of any race).

The two cities are service communities for the resource-based activities that occur in the area. A sawmill in Pilot Rock is the primary employer with most of the remaining employment in retail trade.

2.14.2 Alternative B - U.S. Highway 395 Corridor

Socioeconomic and community resource conditions under this alternative are the same as described in 2.14.1 above.

2.14.3 Alternative C - No Action

The No Action alternative would be to maintain the existing transmission lines within the present corridor with no improvements or upgrades. Environmental conditions are the same as those found under Alternative A.

3.0 ENVIRONMENTAL IMPACTS

The following discusses the impacts of the Proposed Action and the two alternative actions on the various elements of the environment.

3.1 LAND USE

3.1.1 Alternative A - Proposed Action

The Proposed Action would involve the replacement of utility poles and electrical cable through the existing corridor. No additional real estate acquisitions are contemplated to accommodate the new facilities, which mean that no farm grazing or forestland will be removed from production. Thus, there will be no impacts to land use under this alternative.

3.1.2 Alternative B - U.S. Highway 395 Corridor

Construction of a transmission facility through a new corridor would require the acquisition of a ROW of up to approximately 100 feet in width for approximately 31 miles. Land uses along the vast majority this corridor are open range grazing lands, but there are also cultivated tracts. Additionally, the corridor passes through the Battle Mountain Forest Scenic Area. Lands along the entire route would be converted from their current uses to a utility corridor where the vegetation is managed to protect the utility, although open range grazing and cultivated fields could continue without interruption. The amount of land affected under this alternative would be approximately 375 acres.

3.1.3 Alternative C - No Action

The No Action alternative would involve replacement of existing facilities on an ad hoc schedule as damage or failure occurs. Because of the lack of a need for real estate acquisitions, this alternative will have no effect on land use.

3.2 FLOODPLAINS

3.2.1 Alternative A - Proposed Action

Because FEMA has not mapped any regulated floodplains within or adjacent to the existing transmission corridor, there will be no impacts to floodplains under any of the three considered alternatives.

3.2.2 Alternative B - U.S. Highway 395 Corridor

Because FEMA has not mapped any regulated floodplains within or adjacent this alternative corridor, there would be no impacts to floodplains under this alternative.

3.2.3 Alternative C - No Action

Because FEMA has not mapped any regulated floodplains within or adjacent to the established corridor, there would be no impact to floodplains under this alternative.

3.3 WETLANDS

3.3.1 Alternative A - Proposed Action

The landscape associated with the electrical transmission line corridor consists mainly of rolling hills and moderately high elevations. The weather includes substantial temperature variations, significant winds and arid conditions.

The northern portion of the Pilot Rock to Ukiah segment consists mainly of agricultural land and open range with Birch Creek for following the line for approximately 4.5 miles, spanning the creek periodically. The southern portion of the segment contains of the Umatilla National Forest and some open rangeland.

Replacement of the transmission line within the existing corridor is not likely to impact jurisdictional wetlands for a number of reasons including the small number of wetlands within the corridor and the fact that the wetlands are generally associated with streams that are spanned by the lines. New poles would be placed on either side of a stream, canyon or ravine well outside of any stream or wetland area. A significant portion of the existing line is located within established road prisms with the poles located on the shoulders of the roads well outside of any sensitive areas.

3.3.2 Alternative B - U.S. Highway 395 Corridor

The description of the affected environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B has the potential to cause permanent impacts to wetlands by creating and maintaining a new ROW rather than utilizing an existing maintained corridor.

Lower Rugg Spring and Casteel Spring are located adjacent to the northern portion of the Pilot Rock to Ukiah segment crossing the segment periodically. Alexander Creek is located near or adjacent to the center of the segment, crossing periodically. Snipe Creek and Owens Creek are located adjacent to the segment in the southern portion of the segment.

Other seasonal streams and wetlands are located adjacent to the alternative segments. Alternative B would cause permanent impacts due to lack of an existing maintained ROW easement that the Proposed Action

3.3.3 Alternative C - No Action

A No Action alternative would have the same expected effects on the environment as Alternative A. In addition, a No Action alternative would result in leaving behind the current creosote treated poles and the current non-insulated lines. Creosote is known to damage the environment and the current non-insulated lines increase the fire hazard should a pole fall down.

3.4 WILDLIFE RESOURCES

3.4.1 Alternative A - Proposed Action

3.4.1.1 Wildlife Habitat

Wildlife habitat associated with the transmission line corridor consists of open grazing land and coniferous forests with some agriculture land. A small amount of the surrounding area contains shrub-steppe habitat. Portions of the transmission line corridor are located adjacent to or within riparian areas associated with streams. Replacement of the existing line within the existing corridor is not expected to affect wildlife habitat resources in the area. Very little vegetation will need to be cleared or trimmed as part of implementing the Proposed Action. The existing corridor was cleared of trees when the line was originally constructed with routine maintenance taking care of the occasional hazard tree removal and limb trimming.

3.4.1.2 Mammals

Large mammal species that could be expected to occur within the general vicinity of transmission line corridor include mountain lion (*Felix concolor*), bobcat (*Lynx rufus)*, Rocky Mountain elk (*Cervus canadensis nelsoni*), and American black bear (*Euarctos americanus*). Mule deer (*Odocoileus hemionus*) were observed by ELS during our environmental survey.

Small mammals that could be expected to occur in the project vicinity are coyote (*Canis latrans*), badger (*Taxide taxus*), striped skunk (*Mephitis mephitis*), various hares, rabbits, ground squirrels, chipmunks, rats and mice.

No effects to mammals are expected by the implementation of Alternative A.

3.4.1.3 Birds

Non-migratory birds expected to occur in the project vicinity are chukar (*Alectoris chukar*) – an introduced game species. Ring-necked pheasant (*Phasianus colchicus*), wild turkey (*Meleagris gallopavo*) and ruffed grouse (*Bonasa umbellus*) were observed by ELS during our environmental survey. Birds of prey and migratory birds are expected to forage, perch and nest within and adjacent to the project area.

No effects to birds are expected by the implementation of Alternative A.

3.4.2 Alternative B - U.S. Highway 395 Corridor

The description of the affected environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B would cause permanent impacts to wildlife resources by the creation and maintenance of a new ROW rather than utilizing an existing maintained ROW easement for the Proposed Action.

3.4.3 Alternative C - No Action

A No Action Alternative would have the same expected affects on the environment as Alternative A. A No Action alternative would also result in leaving behind the current creosote treated poles and the current non-insulated lines. Creosote is known to damage the environment, and the existing non-insulated lines increase the fire hazard should a pole fall down. In addition, the new lines will follow the guidelines in Suggested Practices for Avian Protection On power Lines: The State of the Art in 2006 and the APP Guidelines prepared by the Edison Electric Institute's Avian Power Line Interaction Committee and USFWS (Edison April 2005).

3.5 VEGETATION RESOURCES

3.5.1 Alternative A - Proposed Action

The northern portion of the transmission corridor consists of open grazing land and agriculture land. The open grazing land consists of an herbaceous layer with scattered native shrubs. The southern portion of the segment includes the Umatilla National Forest with some open rangeland. The portion of the forest within the corridor is dominated by larch, Douglas fir, ponderosa pine, and grand fir with an understory consisting of grasses, forbes and native shrubs. The forested portion of the corridor is currently maintained as a transmission corridor, with routine hazard tree removal and limb trimming. No long-term impacts on vegetation resources are anticipated by implementing Alternative A.

3.5.2 Alternative B - U.S. Highway 395 Corridor

The description of the affected environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B would cause permanent impacts to vegetation due to creating and maintaining a new ROW rather than utilizing an existing maintained ROW easement for the proposed action.

3.5.3 Alternative C - No Action

A No Action Alternative would have the same expected affects on the environment as Alternative A. In addition, a No Action alternative would result in leaving behind the current creosote treated poles and the current non-insulated lines. Creosote is known to damage the environment, and the existing non-insulated lines increase the fire hazard should a pole fall down.

3.6 THREATENED AND ENDANGERED SPECIES

3.6.1 Alternative A - Proposed Action

According to the USFWS, the only threatened or endangered species that may occur in Umatilla County are steelhead, sockeye and chinook salmon and bull trout (USFWS 2007).

3.6.1.1 Bald Eagle

Although bald eagles have been delisted by USFWS, they are still protected under the BGEPA and the MBTA. Bald eagles may forage in the fish bearing streams within and adjacent to the transmission line corridor. The eagles may also fly within the project area to travel from one foraging or nesting site to another. To assure the protection of all migratory birds including birds of prey, the CPCA will follow the guidelines in Suggested Practices for Avian Protection On power Lines: The State of the Art in 2006 and the APP Guidelines prepared by the Edison Electric Institute's Avian Power Line Interaction Committee and USFWS (Edison 2005) by spacing conductors at least 7.5 feet apart. No effects to bald eagles are expected by the implementation of Alternative A.

3.6.1.2 Fish

USFWS lists the following threatened and endangered fish species that may occur within Umatilla County: Snake River Basin, middle Columbia River, and upper Columbia River steelhead; Snake River sockeye; Snake River and upper Columbia River chinook salmon; and Columbia River Basin bull trout. USFWS lists the following threatened and endangered Critical Habitat that may occur within Umatilla County: Snake River sockeye and chinook salmon; and Columbia River Basin bull trout. USFWS currently has no species listed as proposed within Umatilla County.

The transmission line follows Birch Creek for approximately 4.5 miles, spanning the creek periodically. According to ODFW, middle Columbia River steelhead and other resident fish exist within the 4.5-mile stretch of Birch Creek that runs adjacent to or near the transmission line (Duke 2008). Direct impacts to the middle Columbia River steelhead will be avoided to the fullest extent possible by: 1) working during the approved in-water work window provided by ODFW; 2) replacing all poles upland of the OHWM; and 3) installing appropriate erosion control measures. No effects to listed fish are expected by the implementation of Alternative A.

3.6.1.3 Plants

According to USFWS, no threatened or endangered plant species occur in Umatilla County.

3.6.2 Alternative B - U.S. Highway 395 Corridor

The description of the affective environment for Alternative B would be the same as that for the Proposed Action, except that Alternative B would have permanent impacts to habitat by creating and maintaining a new ROW rather than utilizing an existing maintained ROW easement for the proposed action.

3.6.3 Alternative C - No Action

A No Action Alternative would have the same expected affects on the environment as Alternative A. In addition, a No Action alternative would result in leaving behind the current creosote treated poles and the current non-insulated lines. Creosote is known to damage the environment, and the existing non-insulated lines increase the fire hazard should a pole fall down.

3.7 CULTURAL RESOURCES

3.7.1 Alternative A - Proposed Action

Two archaeological sites and two archaeological isolates have been identified in or near the existing transmission line corridor without any apparent disturbance from the existing transmission line structures or maintenance activities. Potential impacts to these finds can be avoided by temporarily marking them in the field and designing the utility poles locations such that they are safely separated from the sites and the construction vehicles and equipment is carefully operated. Such care in the design and implementation will also eliminate the need to perform additional tests.

An additional survey of the remaining segment of the corridor will identify any cultural resources in that area and include recommendations for avoiding impacts as appropriate.

3.7.2 Alternative B – U.S. Highway 395 Corridor

Impacts to this corridor will be avoided if the proposed action is implemented. Should this alternative be selected, a complete survey will be conducted to identify any potential cultural resources and appropriate avoidance or mitigation measures designed.

3.7.3 Alternative C - No Action

The potential for impacts under this alternative are related to the continued maintenance activities required to repair transmission facilities damaged by natural events, vandalism or component failure. While not marked in the field, the resources warranting protection are mapped and on file at CPCA. Future maintenance and repair activities will be conducted with a complete awareness of the resource locations so that field activities are performed with the provision of avoiding disturbance to resources in the construction area.

3.8 AIR QUALITY

3.8.1 Alternative A - Proposed Action

Impacts to air quality resulting from the proposed action will be limited to exhaust from construction equipment and vehicles and dust emissions from the auger drill bits required to drill holes for the new poles. These will terminate upon completion of the construction. Both sets of potential emissions are expected to be minimal and are exempt from air quality permits from the ODEQ. It is notable that a significant portion of this corridor is removed from any substantial residential or other human development except at either terminus in Pilot Rock and Ukiah, reducing further the potential for air quality effects on human activity.

3.8.2 Alternative B - U.S. Highway 395 Corridor

As in the Proposed Action, impacts to air quality would result only the engine exhaust of the construction equipment and vehicles and dust generated by the auger drill bits required to drill holes for the new poles. These will terminate at the completion of construction. Both sets of potential emissions are expected to be minimal and are exempt from air quality permits from the ODEQ.

3.8.3 Alternative C - No Action

Emissions to the air shed under this alternative also would be limited to vehicle and equipment exhaust and dust from drilling holes for the new utility poles. However, unlike the other two alternatives, those emissions would occur only during the repair of damaged or failed components, which would occur on an unscheduled basis and would continue for an unpredictable duration.

3.9 WATER QUALITY

3.9.1 Alternative A - Proposed Action

Surface water resources within the existing corridor are not expected to be impacted by the Proposed Action of replacing the existing line within the established corridor. Water quality will not be degraded below current conditions.

Ground water resources within the vicinity of the existing line corridor will not be impacted by implementing the proposed alternative.

3.9.2 Alternative B - U.S. Highway 395 Corridor

Alternative B has the potential to impact surface water quality due to the extensive clearing and grading required to construct a new line within an undeveloped corridor.

Ground water resources are not likely to be impacted by Alternative B.

3.9.3 Alternative C - No Action

It is expected that surface and ground water resources will not be impacted if the current line is used and maintained within the existing corridor.

3.10 AESTHETICS

3.10.1 Alternative A -Proposed Action

Replacing the existing utility poles and electrical cables through the existing corridor would result in a new transmission facility that would be virtually indistinguishable visually from the current structure. The utility poles may be slightly taller and a more closely spaced.

3.10.2 Alternative B - U.S. Highway 395 Corridor

Implementation of this alternative would require the construction of approximately 27 miles of new transmission facilities in a new corridor. Because the vegetation along this route is predominantly low growing and sparse, the new facilities would add a new man-made feature to the view shed. However, as the corridor passes through the Battle Mountain Forest State Scenic Corridor, a cleared swath of timber would likely be highly visible from U.S. Highway 395 and disrupt the natural scenic views with the addition of artificial structures.

3.10.3 Alternative C - No Action

The No Action alternative would result in the replacement of existing facilities with like facilities as needed due to damage or failure. Those facilities visible from local roads or highways would be the same as at present.

3.11 TRANSPORTATION

3.11.1 Alternative A - Proposed Action

Effects to the transportation system under this proposed action would be limited to the truck and equipment related traffic generated for the installation of the new facilities and removal of the old. The number of vehicles will be small and the local roads will not fall below adopted level of service standards. Traffic may be stopped temporarily from time to time at those locations where the facilities cross a road and the cable is attached to the utility poles. Except for periodic, infrequent maintenance traffic, transportation effects under this alternative would cease when project construction is completed.

3.11.2 Alternative B - U.S. Highway 395 Corridor

This corridor follows Highway 244 on the north side for approximately one mile. Once the corridor reaches Highway 395, the Alternative B corridor remains on the east side of the ROW. Effects to the transportation system will be limited to the traffic generated by the equipment needed to install the new facilities. There may temporary traffic stoppages from time to time. Except for periodic infrequency maintenance traffic, transportation effects under this alternative would cease when project construction is completed.

3.11.3 Alternative C - No Action

Transportation impacts under the No Action alternative would be limited to those trips necessary to make repairs caused by storms, fires, and other natural events or failure of the facility for some other reason. Depending on the location and nature of the maintenance or repair, there may be periodic temporary traffic stoppages. The frequency of these trips cannot be predicted.

3.12 NOISE, RADIO AND TELEVISION INTERFERENCE

3.12.1 Alternative A - Proposed Action

The low-level operating noise audible during misty conditions will likely continue with the upgraded facilities.

Audible noise will be temporary and localized during the construction phase. Construction activity and its associated noise will occur within a few hundred feet of a work site. A typical work site would consist of the following: the setting of a transmission pole, stringing conductor on the pole, "clip in" of conductor to the insulators on the pole and last, removing the old pole. In each process, specialized equipment (a digger, a man-lift, or a pick up truck) may be emitting noise. In each task, the vehicle(s) will be typically operating for two to three hours.

The new line will use polymer post type insulators that will eliminate any sparking and the associated radio interference.

To mitigate the potential problem of induced voltages in metal objects near the new line, all fences crossing and near the transmission line will be grounded by means of ground rods driven into the ground near the fences and bonded to the wires or other metallic fencing. Any other metallic objects in close vicinity that are ungrounded will also be effectively grounded.

3.12.2 Alternative B - U.S. Highway 395 Corridor

Conditions and actions under this alternative will be as described in 3.12.1 above.

3.12.3 Alternative C - No Action

Under this alternative, operating noise will continue to be audible during misty conditions. Construction noise would be limited to those times when repairs or maintenance activities are required.

No update to the existing insulators would occur, resulting in the potential for sparking and radio interference to continue. Similarly, a program to ground existing fences and other metal objects near the existing facility is not anticipated so that induced voltages could continue to occur.

3.13 HUMAN HEALTH AND SAFETY

3.13.1 Alternative A - Proposed Action

The proposed action would result in new facilities installed in the established corridor essentially where the existing facilities are located, with 40 to 50 feet of the edge of the ROW on either side. Additionally, the new support poles will include guy wires to increase the structural support and reduce the potential for the poles to fail and upgraded insulators to reduce conductor blow out and sparking. Metal objects near the proposed upgrades would also be grounded to eliminate induced voltage. The existing corridor will maintain the current separation from public and private roads and vegetation to reduce the potential for fire damage or vehicular accident damage.

Because the proposed action is to transmit electricity through the new lines at the current levels, the potential effects of EMF from the new lines would be virtually the same as what is produced with the existing facilities.

3.13.2 Alternative B - U.S. Highway 395 Corridor

Paralleling Highways 244 and 395, implementation of this alternative route would include a delineated and cleared ROW corridor of at least 60 feet and preferably 100 feet to establish and maintain sufficient separation between the potential facilities and any private property or other public improvements such as roads or other utility facilities. As in the proposed action, poles would include guy wires to increase structural support and insulators would be upgraded over those currently used to reduce conductor blow out and sparking. Metal objects in close proximity to this potential facility would be grounded to eliminate the potential for induced voltage.

3.13.3 Alternative C - No Action

Human health and safety conditions under the No Action alternative would remain as at present with the increasing potential for pole failure as the facilities continue to age and deteriorate. No additional guy wires or other structural supports are contemplated. Neither is there a planned program to replace the insulators or ground metal objects nearby.

3.14 SOCIOECONOMIC AND COMMUNITY RESOURCES

3.14.1 Alternative A - Proposed Action

The Pilot Rock-Ukiah transmission segment was installed in the early 1950s and most of the utility poles and electrical cable are original equipment. The line operates in an environment of widely varying temperatures and substantial winds. Environmental conditions and time of service make the mechanical integrity of the electrical cable questionable and the facilities as a whole are approaching the end of their useful life. Continued operation of this existing line is thought to substantially reduce the overall reliability of the CPCA system.

The increased reliability of the proposed facilities would better support the current and future residents and businesses of Umatilla County. It will facilitate the continuous

delivery of un-interrupted electricity to CPCA customers, thus contributing to the local and regional economies.

3.14.2 Alternative B - U.S. Highway 395 Corridor

Implementation of Alternative B would result in socio-economic conditions similar to those of the proposed action.

3.14.3 Alternative C - No Action

The No Action alternative outcome would be the continued use of the existing facilities with repairs as needed. Power outages due to line or pole failure from environmental conditions would likely become more frequent disrupting the activities of CPCA customers. On a regional scale, this fringe transmission line would be incompatible with the BPA system being upgraded throughout the region. This would reduce the effectiveness of local and regional economic development efforts and tend to retard the local economy.

4.0 CUMULATIVE IMPACTS ANALYSIS

The following discusses the cumulative impacts of the proposed action on the studied elements of the environment.

4.1 LAND USE

Because the proposed project involves upgrading an existing transmission line, cumulative impacts to land uses would be minimal. No additional ROW is anticipated to be acquired, although some additional clearing within forested areas of the existing ROW may occur. Should additions or expansion of the ROW be planned in the future, appropriate evaluation of potential cumulative land use impacts would be required at that time.

Consultations with Umatilla County and the cities of Pilot Rock and Ukiah have indicated that there are no proposed or projected development projects in close proximity to the ROW that would contribute to cumulative impacts associated with the proposed action (Jennings 2008; Carey 2008; Arbogast 2008). No development proposals are thought to be pending in or near Ukiah.

4.2 FLOODPLAINS

The proposed action would upgrade an existing transmission line within an established electrical transmission corridor. Although the final design has not yet been completed, no cumulative impacts to floodplains along the ROW are anticipated because the corridor is outside of any mapped regulatory floodplains.

4.3 WETLANDS

All existing transmission poles are located either in the existing ROW of roads, or span the streams and wetlands entirely. The proposed action involves upgrading an existing transmission line within an established electrical transmission corridor; potential cumulative impacts to wetlands will be minimal. Should additions or expansion of the ROW be planned in the future, appropriate evaluation of potential cumulative wetland impacts would be required at that time. There are no plans to linearly expand the current transmission line into areas not currently served with municipal electricity service. Expansion of the ROW is also not scheduled for widening as the existing ROW can easily accommodate the existing line, the proposed line improvements, and all future anticipated upgrades. Upgrades to the transmission line will not result in impacts to wetlands either during construction of the new line or maintenance of the line once it is constructed.

4.4 WILDLIFE RESOURCES

Wildlife habitat associated with the transmission line corridor consists mainly of open grazing land and coniferous forests with some agriculture land. A small amount of the surrounding area contains shrub-steppe habitat. The proposed action involves upgrading an existing transmission line within an established electrical transmission corridor. Potential for cumulative impacts to wildlife resources would be minimal. Should additions or expansion of the ROW be planned in the future, appropriate evaluation of potential cumulative wildlife resource impacts would be required at that time.

4.5 VEGETATION RESOURCES

The northern portion of the transmission corridor consists of mainly open grazing land and agriculture land. The open grazing land consists of an herbaceous layer with a scattered scrub-shrub layer consisting mostly of sagebrush. The southern portion of the segment includes the Umatilla National Forest with some open rangeland. The portion of the forest within the corridor is dominated by larch, Douglas fir, Ponderosa pine, and grand fir and a sparse under story consisting mainly of sagebrush. This forested portion is currently maintained as a transmission corridor. The proposed action involves upgrading an existing transmission line within an established electrical transmission corridor. Potential for cumulative impacts to vegetation resources would be minimal. Should additions or expansion of the ROW be planned in the future, appropriate evaluation of potential cumulative vegetation resource impacts would be required at that time.

4.6 THREATENED AND ENDANGERED SPECIES

According to the USFWS, the only threatened or endangered species that may occur in Umatilla County are steelhead, sockeye and Chinook salmon and bull trout, as the bald eagle was delisted by the USFWS in August 2007 (USFWS 2007). According to USFWS, no threatened or endangered plant species occur in Umatilla County. Direct impacts to the middle Columbia River steelhead will be avoided to the fullest extent

possible by: 1) working during the approved in-water work window provided by ODFW and 2) replacing all poles upland of the OHWM. The proposed action involves upgrading an existing transmission line within an established electrical transmission corridor. Potential for cumulative impacts to threatened and endangered species would be avoided to the greatest extent possible. Should additions or expansion of the ROW be planned in the future, appropriate evaluation of potential cumulative threatened and endangered species impacts would be required at that time.

4.7 CULTURAL RESOURCES

Cumulative impacts to the cultural resources within the established corridor would be limited to those related to the periodic inspections and any repair and maintenance activities that may be required. Because of the upgrade to the facilities, maintenance activities should decrease; repairs would be a function of damage from natural events such as storms or fire, or vandalism. CPCA knowledge of resource locations will facilitate avoiding impacts during these activities.

4.8 AIR QUALITY

Because the Proposed Action involves upgrading an existing transmission line, cumulative impacts to air quality would be minimal. Should additions or expansion of facilities be planned in the future, appropriate evaluation of potential cumulative air quality impacts would be prepared at that time.

4.9 WATER QUALITY

The Proposed Action involves upgrading an existing transmission line within an established electrical transmission corridor. Surface water resources within the existing corridor are limited to a few small to medium streams, small man-made livestock watering ponds within areas used as rangeland, and numerous small seasonal streams and drainages. Surface and ground water resources within the existing corridor are not expected to be impacted by the Proposed Action and water quality will not be degraded below current conditions. Cumulative impacts to water quality would be minimal. Should additions or expansion of facilities be planned in the future, appropriate evaluation of potential cumulative water quality impacts would be prepared at that time.

4.10 AESTHETICS

Because the Proposed Action involves upgrading an existing transmission line, cumulative aesthetic impacts would be minimal. Should additions or expansion of facilities be planned in the future, appropriate evaluation of potential cumulative aesthetic impacts would be prepared at that time.

4.11 TRANSPORTATION

Because the Proposed Action involves upgrading an existing transmission line, cumulative impacts to transportation systems quality would be minimal. Should

additions or expansion of facilities be planned in the future, appropriate evaluation of potential cumulative transportation impacts would be prepared at that time.

4.12 NOISE, RADIO AND TELEVISION INTERFERENCE

The Proposed Action would upgrade an existing transmission line within an existing ROW. The transmission line would be energized at 69KV, comparable to the existing facility. This new facility is not anticipated to have any cumulative effect on noise, radio or television interference.

4.13 HUMAN HEALTH AND SAFETY

The Proposed Action would upgrade an existing electrical transmission line within an established corridor and would carry voltage at current levels. This level will not change the magnetic field exposures from existing conditions and will not have any cumulative effect on human health or safety.

4.14 SOCIOECONOMIC AND COMMUNITY RESOURCES

Because the Proposed Action would occur within an established electrical transmission corridor, cumulative impacts on the population or economy of Umatilla County or the two cities at either terminus of the transmission line would be minimal.

5.0 PROPOSED MITIGATION AND MONITORING

The following discusses the mitigation of the Proposed Action for each of the studied elements of the environment. No monitoring has been identified as being necessary.

5.1 LAND USE

Impacts to land uses would be minimal and no mitigation has been identified as necessary.

5.2 FLOODPLAINS

No impacts to floodplains are anticipated because the corridor is outside of any floodplains.

5.3 WETLANDS

Impacts to wetlands would be minimal and no compensatory mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to avoid and minimize impacts. All existing transmission poles either are located in the existing ROW of roads, or span the streams and wetlands entirely. New poles would be placed outside of any stream or wetland area. If necessary, installation of erosion control measures such as silt fencing or straw bales around the disturbed area during construction and re-vegetation the disturbance area to stabilize the exposed soil can further reduce impacts. Unlike the old poles existing conditions, the new poles have not been treated

with creosote, which is known to be damaging to the environment, and the new lines will be insulated to decrease any fire hazard should a pole fall down.

5.4 WILDLIFE RESOURCES

Impacts to wildlife resources would be minimal and no compensatory mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to avoid and minimize impacts. The existing corridor was cleared of trees when the line was originally constructed with routine maintenance taking care of the occasional hazard tree removal and limb trimming. Therefore, very little vegetation will need to be cleared or trimmed as part of implementing the Proposed Action and habitat will be similar to existing conditions. The Proposed Action will actually make the line safe for raptors and other large birds by locating multiple lines greater distances apart to eliminate arcing and providing increased insulation on the wires. In addition, the new lines will follow the guidelines in Suggested Practices for Avian Protection On power Lines: The State of the Art in 2006 and the "Avian Protection Plan (APP) Guidelines" prepared by The Edison Electric Institute's Avian Power Line Interaction Committee and USFWS by spacing the insulators at least 7.5 feet apart. Unlike existing conditions, the new poles will not be treated with creosote, which is known to be damaging to the environment, and the new lines will be insulated to decrease any fire hazard should a pole fall down.

5.5 VEGETATION RESOURCES

Impacts to vegetation resources would be minimal and no compensatory mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to avoid and minimize impacts. The existing corridor was cleared of trees when the line was originally constructed with routine maintenance taking care of the occasional hazard tree removal and limb trimming; therefore, very little vegetation will need to be cleared or trimmed as part of implementing the Proposed Action. The new insulated lines will decrease the fire hazard should a pole fall down compared to the current non-insulated lines.

5.6 THREATENED AND ENDANGERED SPECIES

Impacts to threatened and endangered species would be avoided and no compensatory mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to avoid impacts. Direct impacts to the middle Columbia River steelhead will be avoided to the fullest extent possible by: 1) working during the approved in-water work window provided by ODFW; 2) replacing all poles upland of the OHWM); and 3) installing erosion control measures such as silt fencing or straw bales around the disturbed area during construction and re-vegetating the disturbance area to stabilize the exposed soil, and 3) installing appropriate erosion control measures. To assure the protection of all migratory birds including birds of prey, the CPCA will follow the guidelines in Suggested Practices for Avian Protection On power Lines: The State of the Art in 2006 and the APP Guidelines prepared by the Edison Electric Institute's Avian

Power Line Interaction Committee and USFWS by spacing conductors at least 7.5 feet apart.

5.7 CULTURAL RESOURCES

Impacts to cultural resources would be limited and no mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to avoid impacts including temporarily marking sites in the field and designing the utility poles locations to avoid the sites and careful operation of construction vehicles and equipment. CPCA knowledge of resource locations will facilitate avoiding impacts during ongoing maintenance activities. The segments of the corridor that have not yet been surveyed because of snow cover will be surveyed upon the snow melting in the spring. Should any resources be identified at that time, they will be catalogued and determined whether they could be avoided. If such resources cannot be avoided, they would be assessed for importance and a plan for preservation designed as necessary and appropriate. If any resources are discovered during construction, the contractor will suspend operations and contact the project cultural resources specialist who will in turn assess the situation and contact the state historic preservation officer and Tribe to establish the appropriate actions for preservation.

5.8 AIR QUALITY

Impacts to air quality would be minimal and no mitigation has been identified as necessary.

5.9 WATER QUALITY

No impacts to water quality are anticipated and no mitigation has been identified as necessary.

5.10 AESTHETICS

Impacts to aesthetics would be minimal and no mitigation has been identified as necessary.

5.11 TRANSPORTATION

Impacts to transportation would be minimal and no mitigation has been identified as necessary.

5.12 NOISE, RADIO AND TELEVISION INTERFERENCE

No effect on noise, radio or television interference are anticipated and no compensatory mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to improve upon the existing conditions. The new line will use polymer post type insulators that will eliminate any sparking and the associated radio interference. To mitigate the potential problem of induced voltages in metal objects near the new line, all fences crossing and near the transmission line will be grounded by means of ground rods driven into the ground near the fences and bonded to the wires or

other metallic fencing. Any other metallic objects in close vicinity that are ungrounded will also be effectively grounded.

5.13 HUMAN HEALTH AND SAFETY

No impacts to human health and safety are anticipated and no compensatory mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to avoid impacts and improve upon the existing conditions. The Proposed Action would upgrade an existing electrical transmission line within an established corridor. The new support poles will include guy wires to increase the structural support and reduce the potential for the poles to fail and upgraded insulators to reduce conductor blow out and sparking. Metal objects near the proposed upgrades would also be grounded to eliminate induced voltage. The existing corridor will maintain the current separation from public and private roads, which will continue to keep the potential for vehicular accident and fire damage low.

5.14 SOCIOECONOMIC AND COMMUNITY RESOURCES

Impacts to vegetation resources would be minimal and no compensatory mitigation has been identified as necessary. Mitigation measures within the project design will be utilized to prevent impacts and improve upon the existing conditions. The increased reliability of the facilities of the Proposed Action would better support the current and future residents and businesses of Umatilla County. It will facilitate the continuous delivery of un-interrupted electricity to CPCA customers, thus contributing to the local and regional economy.

6.0 CONSULTATION AND COORDINATION

6.1 LIST OF PREPARERS

6.1.1 Brown and Kysar, Inc.

Richard Rosenberg, PE

6.1.2 Ecological Land Services, Inc.

Skip Urling
Tim Haderly
Michele McGraw
Tessa Dennis

6.1.3 Archaeological Investigations Northwest

Brian G. Buchanan
Terry Ozbun

6.2 PERSONS, GROUPS, OR AGENCIES CONSULTED

6.2.1 Local Agencies

Umatilla County

Contacts: Tamara Mabbott, Richard Jennings,
Department Resource Services and Development
216 SE Fourth Street
Pendleton, Oregon 97801
(541) 278-6252

City of Pilot Rock
Contact: Jackie Carey
144 N. Alder Place
PO Box 130
Pilot Rock, Oregon 97868
(541) 443-2811

City of Ukiah
Contact: Pam Arbogast
(541) 427-3260

6.2.2 State Agencies

Oregon Department of Agriculture
Contact: Natural Resources: (503) 986-4700
Soil and Water Conservation Dist.: (503) 986-4700
635 Capitol St. NE
Salem, Oregon 97301

Oregon Department of Energy
Contact: Adam Bless
625 Marion St. NE
Salem, Oregon 97301
(503) 378-4040

Oregon Department of Environmental Quality
Contact: Joni Hammond, Region Administrator
700 SE Emigrant, Suite 330
Pendleton, Oregon 97801
(541) 276-4063

Contact: Bonnie Hough
Bend Office
300 SE Reed Market Road (temporary)
Bend, Oregon 97702
(541) 388-8283

Oregon Department of Fish and Wildlife
Contact: Bill Duke

John Day Watershed District Office
73471 Mytinger Lane
Pendleton, Oregon 97801
(541) 276-2344

Contact: Shannon Jewett
Heppner Field Office
54173 Hwy 74, PO Box 363
Heppner, Oregon 97836
(541) 676-5230

Oregon Department of Land Conservation and Development
Contacts: Mark Radabaugh (541)318-2899
Jon Jinings (541)318-2890
888 N.W. Hill Street, Suite 3
Bend, Oregon 97701

Oregon Department of State Lands
Eastern Region
Contacts: Nancy Pustis, Regional Manager (541)388-6112
Land Management
Eric Metz, Regional Manager (503)379-3805 x.266
Wetlands/Waterways Removal/Fill
1645 NE Forbes Rd., Suite 112
Bend, Oregon 97701

Oregon Water Resources
North Central Region
Contact: Michael Ladd, Region Manager
116 SE Dorion Ave
Pendleton, Oregon 97801
(541)278-5456

Oregon Watershed Enhancement Board
Central Oregon Regional Office
Contact: Rick Craiger
6574 NW Larch Drive
Redmond, Oregon 97756
(541) 923-7353

Oregon Parks and Recreation Department
Heritage Programs Division
Archaeological Services
Contact: Tim Wood, Director (541) 986-0719

725 Summer St NE, Suite C
Salem, Oregon 97301
(503) 986-0677

6.2.3 Federal Agencies

U.S. Army Corps of Engineers
Reference: CENWP-0D-GP
La Grande Field Office
3502 Highway 303
La Grande, Oregon 97850

NOAA National Marine Fisheries
Northwest Region
Contact: Bob Lohn, Regional Administrator
7600 Sand Point Way NE,
Seattle, Washington 98115-0070
(206) 526-6150

Bureau of Land Management
Prineville Office
3050 N.E. 3rd Street
Prineville, Oregon 97754
(541) 416-6700

Umatilla National Forest
2517 S.W. Hailey Avenue
Pendleton, Oregon 97801
(541) 278-3716

U.S. Fish & Wildlife Service
La Grande Field Office
Contact: Gary Miller
3502 Hwy 30
La Grande, Oregon 97850
(541) 962-8584

6.2.4 Others

Gilliam-East John Day Watershed Council
Contact: Teri McElroy
PO Box 106
Condon, Oregon 97823
(541) 384-2271
(541) 384-2571 (fax)

Umatilla Board of Trustees
Contact: Donald Sampson, Chairman
P.O. Box 638.
Pendleton, Oregon 97801
(541) 276-3165, (303)774-7836 (Colorado Office- No direct line)
info@Firstnations.org

7.0 REFERENCES

Arbogast, Pam. February 2008. City of Ukiah. Personal Communication.

Avian Power Line Interaction Committee, the Edison Electric Institute, and the California Energy Commission. 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006.

Bless, Adam. July 2007. Oregon Department of Energy. Personal Communication.

Carey, Jackie. January 2008. City of Pilot Rock. Personal Communication.

Duke, Bill. January 2008. Biologist. Oregon Department Fish and Wildlife - John Day Watershed District Office. Personal Communication.

Edison Electric Institute's Avian Power Line Interaction Committee. U.S. Fish and Wildlife Service. 2005. Avian Protection Plan Guidelines. April 2005.

Hough, Bonnie. January 2008. Oregon Department of Environmental Quality – Bend Office. Personal Communication.

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Jennings, Richard. January 2008. Umatilla County - Department of Resource Services and Development. Personal Communication.

Jewett, Shannon. July 2007. Oregon Department of Fish and Wildlife - Heppner Field Office. Personal Communication.

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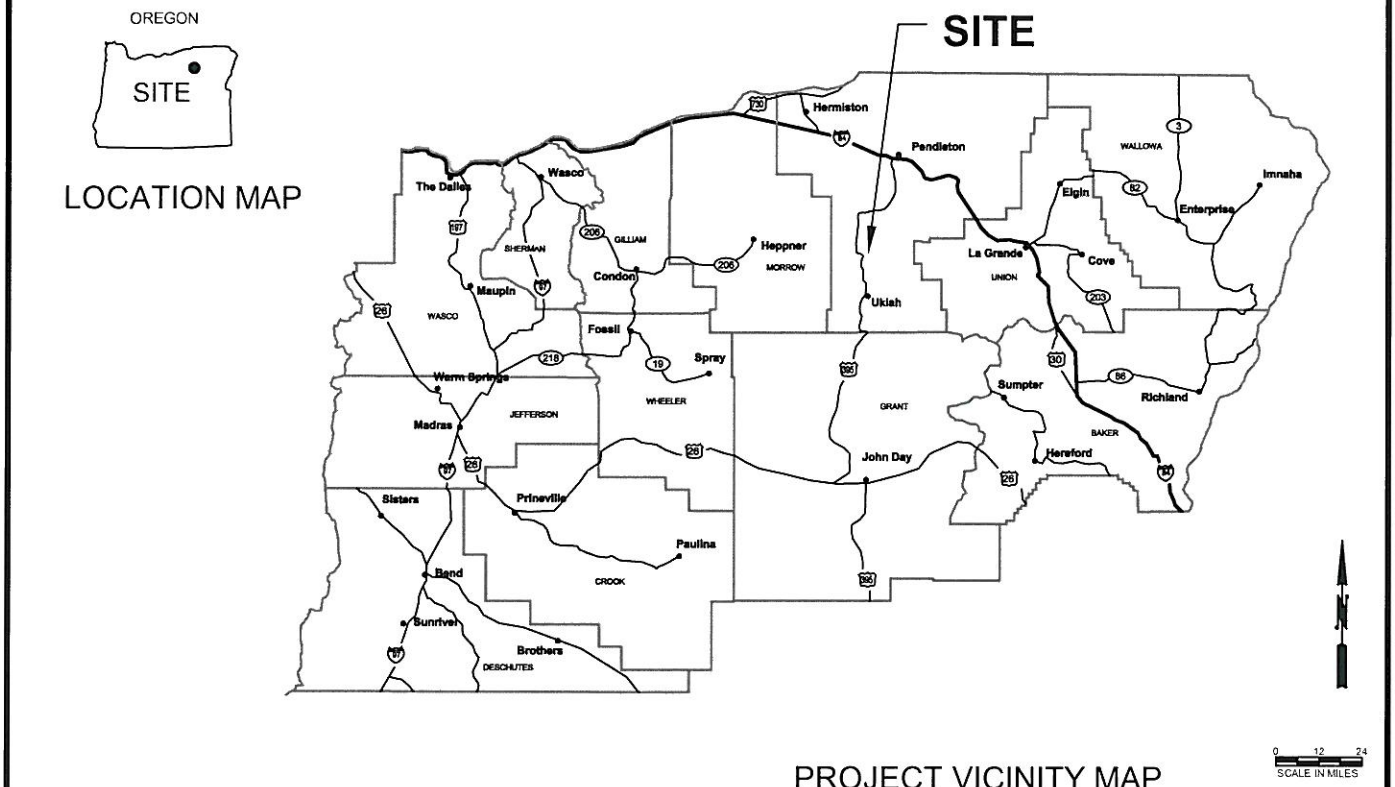
U.S. Fish and Wildlife Service. 2007. Letter – CPCA Transmission Line Upgrade Project. July 10, 2007.

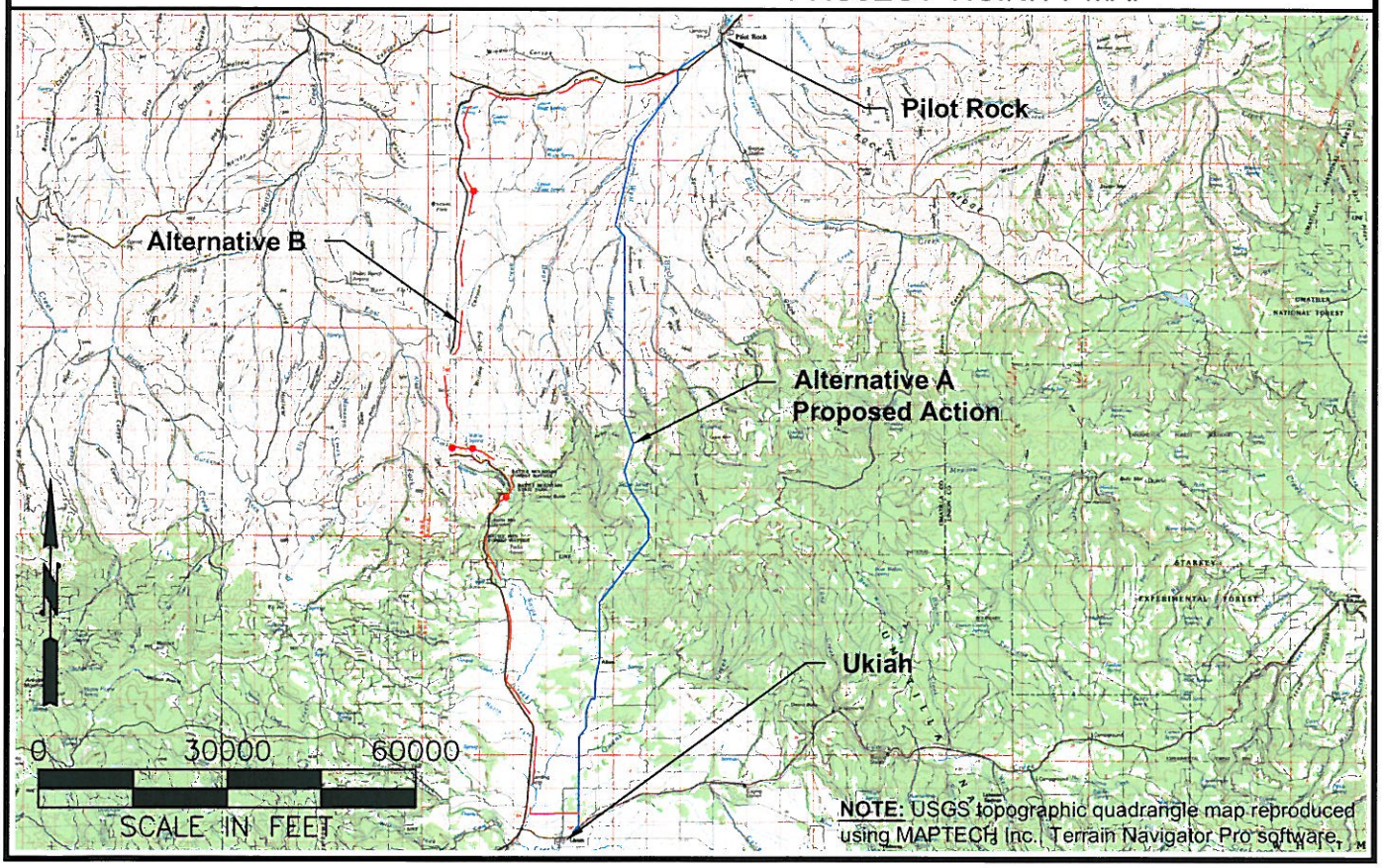
Bless, Adam. July 2007. Oregon Department of Energy. Personal Communication.

Zumwalt, Shawn. July 2007. Oregon Department of State Lands. Personal Communication.

FIGURE 1

VICINITY MAP





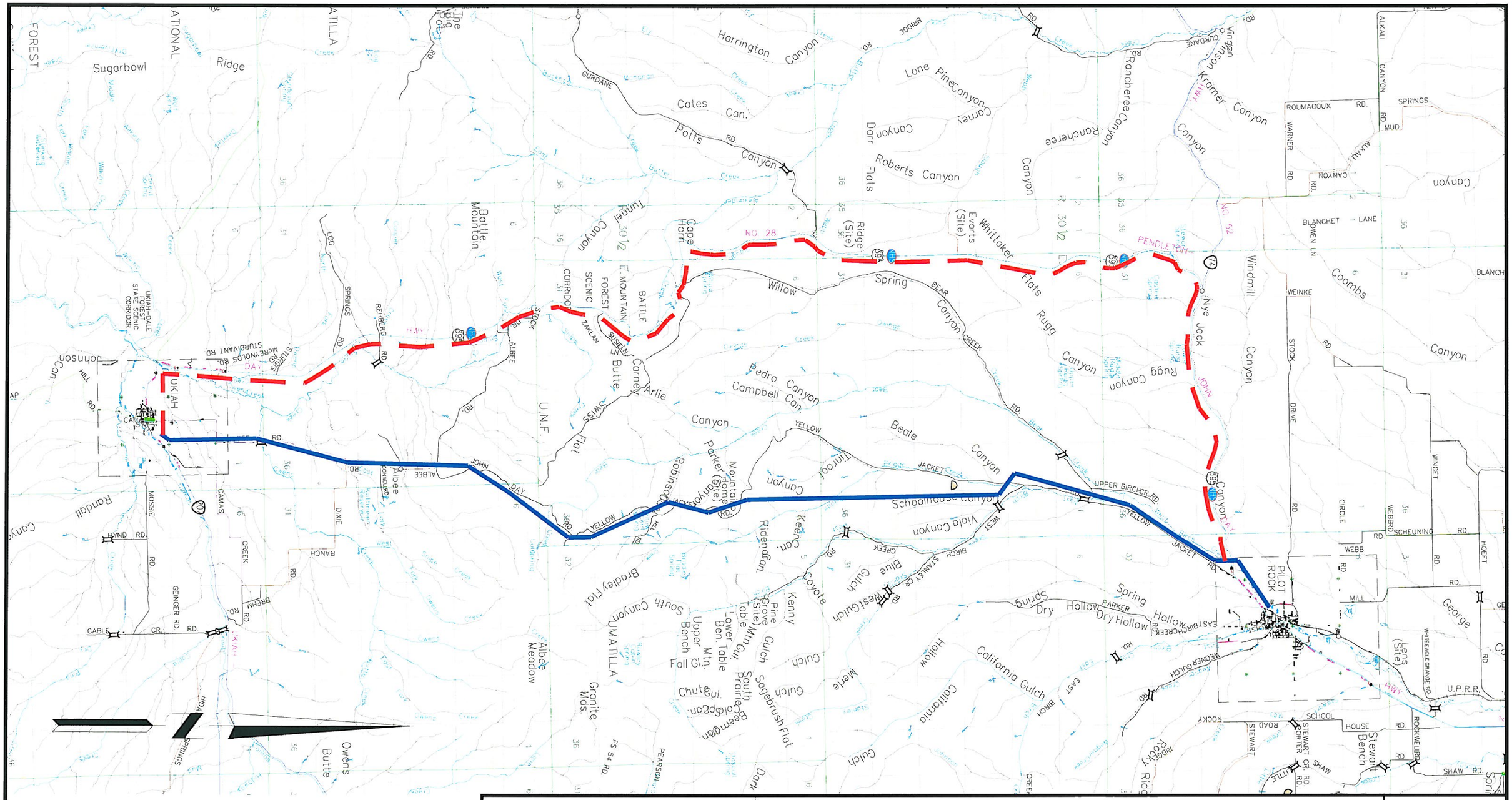
ECOLOGICAL LAND SERVICES, INC.
1157 3rd Ave., Suite 220 Longview, WA 98632
(360) 578-1371 Fax: (360) 414-9305

DATE: 2/1/08
DWN: CB
REQ. BY: MLM
PRJ. MGR: TH
CHK: MMM
APPR:
PROJ.#: 1561.02

Figure 1
VICINITY MAP
Columbia Power Cooperative Association
Transmission Line Upgrade
Brown & Kysar, Inc.
Umatilla County, Oregon

FIGURE 2

ALTERNATE ROUTES MAP



ALTERNATIVE A- PROPOSED ACTION

ALTERNATIVE B

NO.	DATE	REVISION	INIT.

THE ABOVE LINE IS 1" LONG AT THE CORRECT SCALE. IF IT IS NOT, SCALE ACCORDINGLY.

B & K I

BROWN & KYSAR, INC.
Engineering & Consulting
P.O. Box 1720 Battle Ground WA 98604

DRAWN BY	06/12/07
DTR	
DESIGNED BY	APP'D BY
RWR	EJK

COLUMBIA POWER COOPERATIVE ASSOCIATION
PO BOX 97
MONUMENT OR 97864

TRANSMISSION UPGRADE - ALTERNATE ROUTES
PILOT ROCK - UKIAH

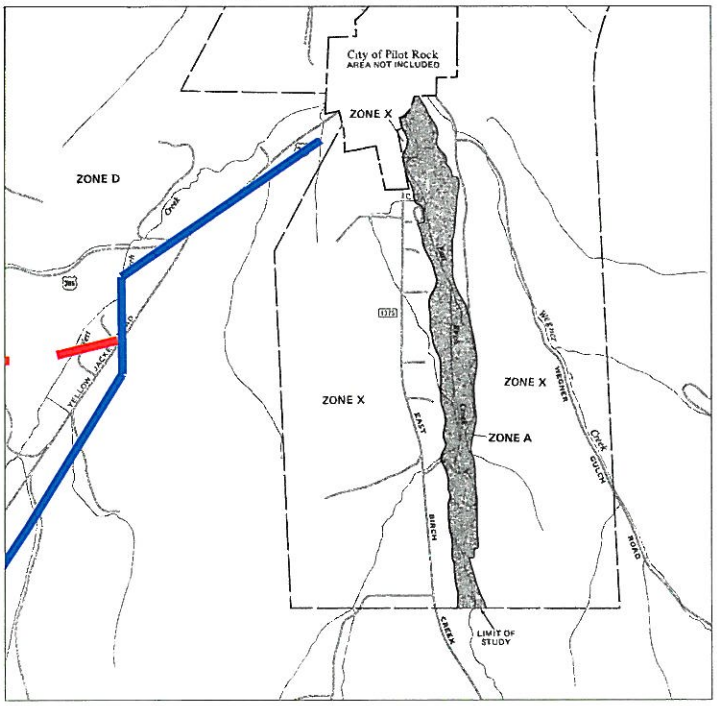
PROJECT: CPa6-001-PU

Figure 2

0
REVISION

E1
1 OF 31

FIGURE 3
FEMA MAPS



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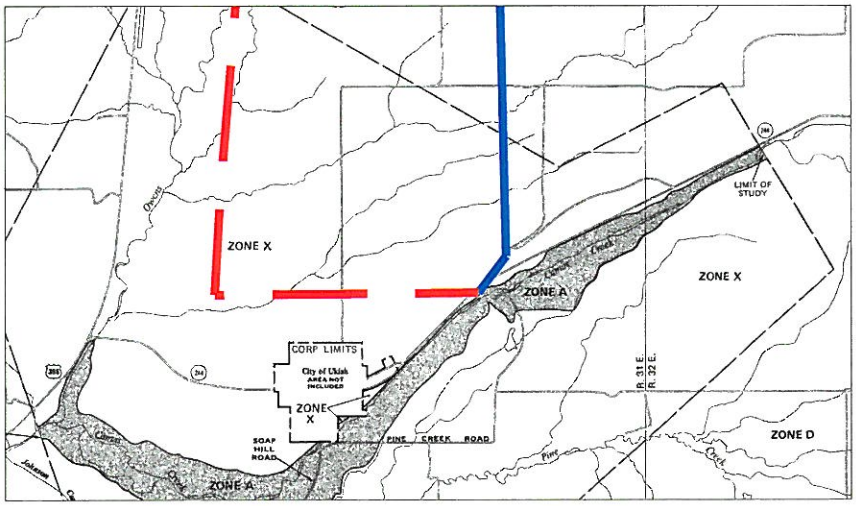

PORTION OF PANEL #4102041750B

LEGEND:

ALTERNATIVE A- PROPOSED ACTION

ALTERNATIVE B

BOUNDARY DIVIDING SPECIAL FLOOD HAZARD ZONES, AND BOUNDARY DIVIDING AREAS OF DIFFERENT COASTAL BASE FLOOD ELEVATIONS WITHIN SPECIAL FLOOD HAZARD ZONES

N

0 5000 10000

SCALE IN FEET

ECOLOGICAL LAND SERVICES, INC.
1157 3rd Ave., Suite 220 Longview, WA 98632
(360) 578-1371 Fax: (360) 414-9305

DATE: 2/1/08
DWN: CB
REQ. BY: MLM
PRJ. MGR: TH
CHK: MMM
APPR:
PROJ.#: 1561.02

Figure 3
FEMA MAP
Columbia Power Cooperative Association
Transmission Line Upgrade
Brown & Kysar, Inc.
Umatilla County, Oregon

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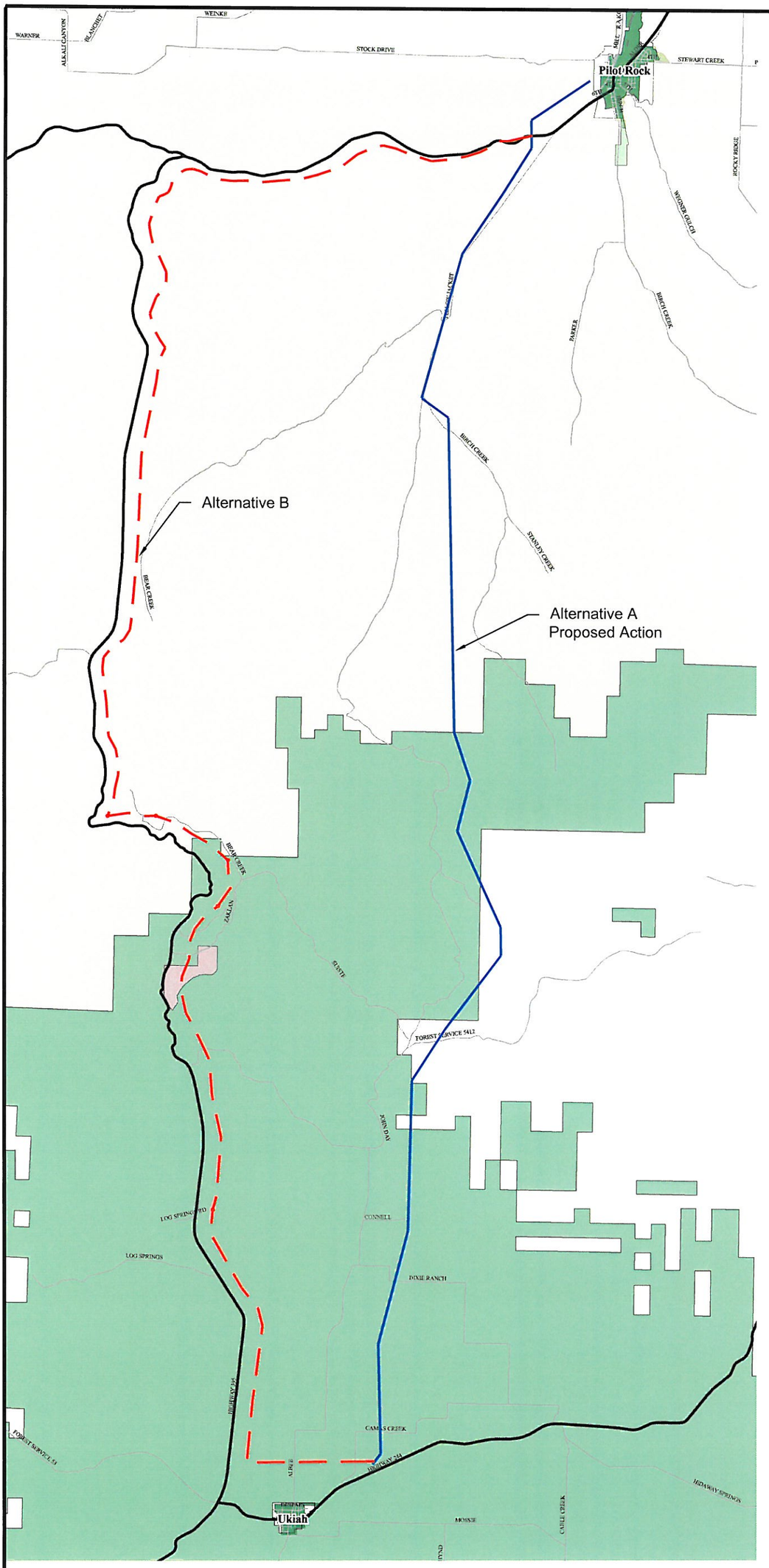
FIGURE 4
COUNTY ZONING MAPS



Legend:

- Exclusive Farm Use (EFU)
- Grazing Forest (GF)
- Forest Residential (FR)

N

0 10000 20000

SCALE IN FEET

NOTE: Base map provided by the Umatilla County GIS Department, 2008.

ECOLOGICAL LAND SERVICES, INC.
1157 3rd Ave., Suite 220 Longview, WA 98632
(360) 578-1371 Fax: (360) 414-9305

DATE: 2/1/08
DWN: CB
REQ. BY: SU
PRJ. MGR: SU
CHK: MMM
APPR:
PROJ.#: 1561.02

Figure 4
ZONING MAP
Columbia Power Cooperative Association Transmission Line Upgrade
Brown & Kysar, inc.
Umatilla County, Oregon

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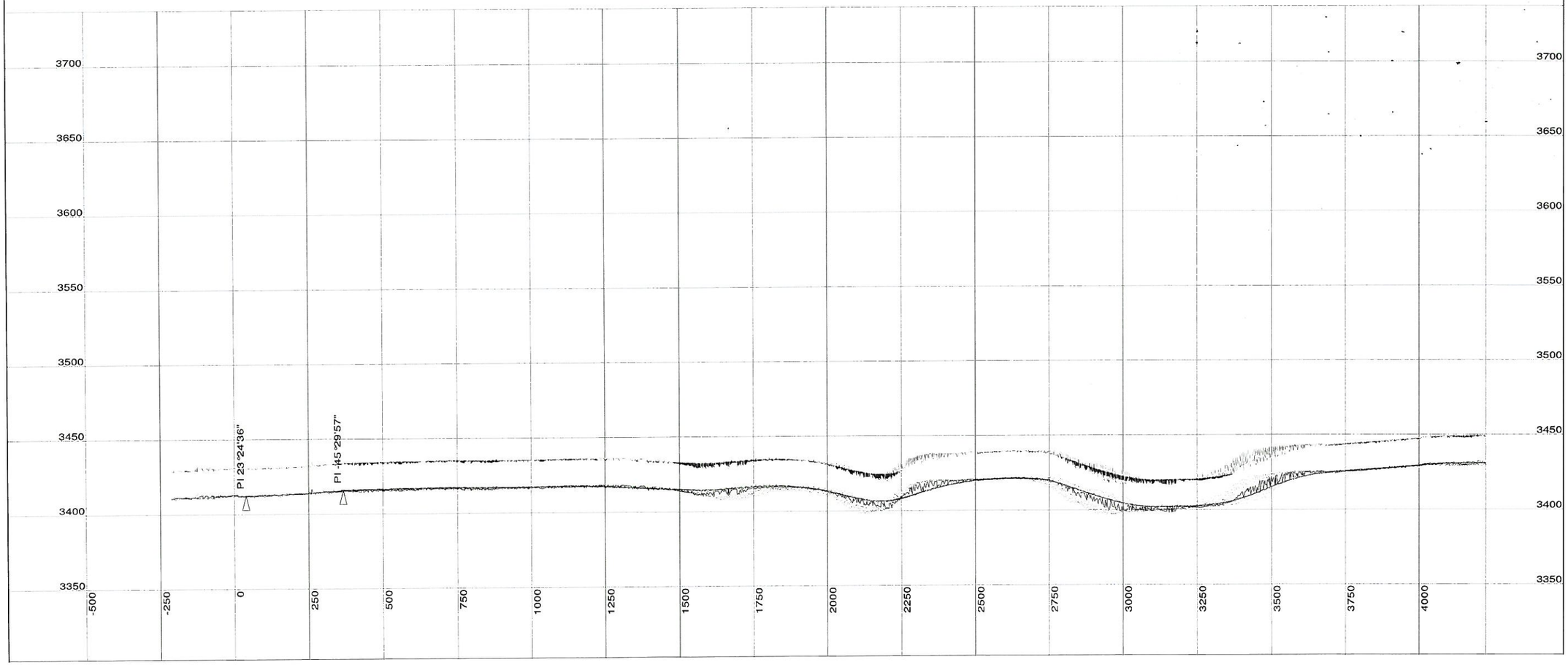
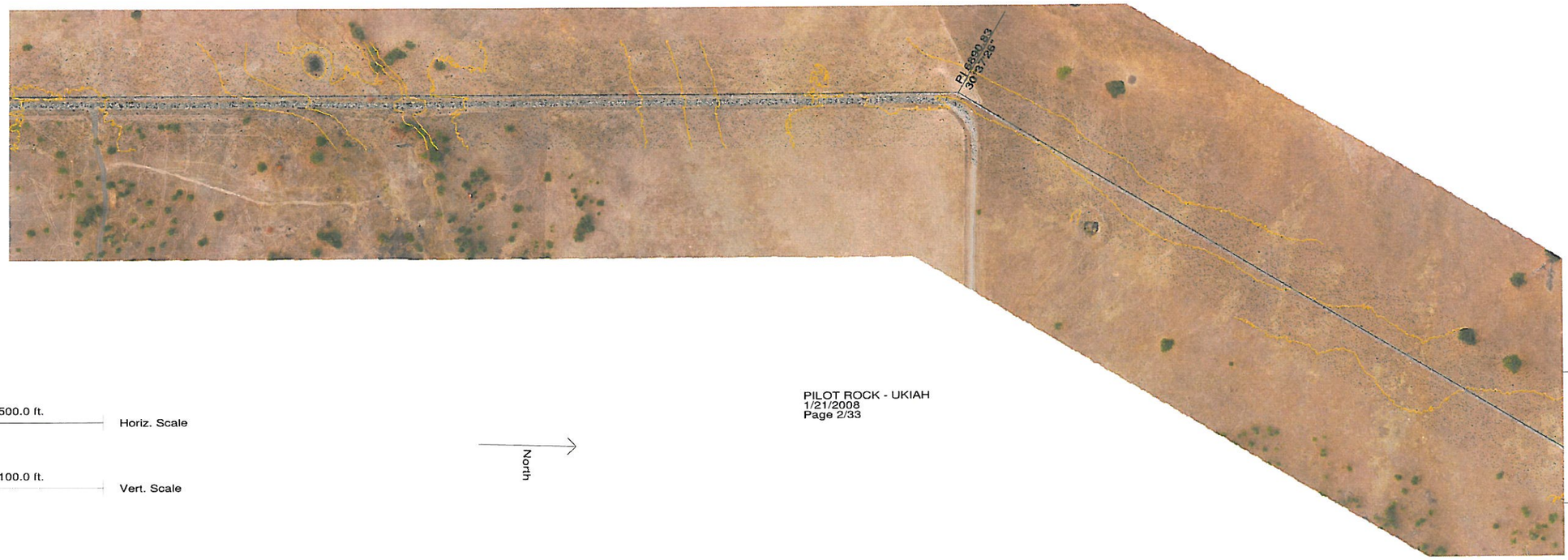
Appendix A

Alternative Detail Aerial Maps

PLS-CADD Drawing





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North

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1/21/2008
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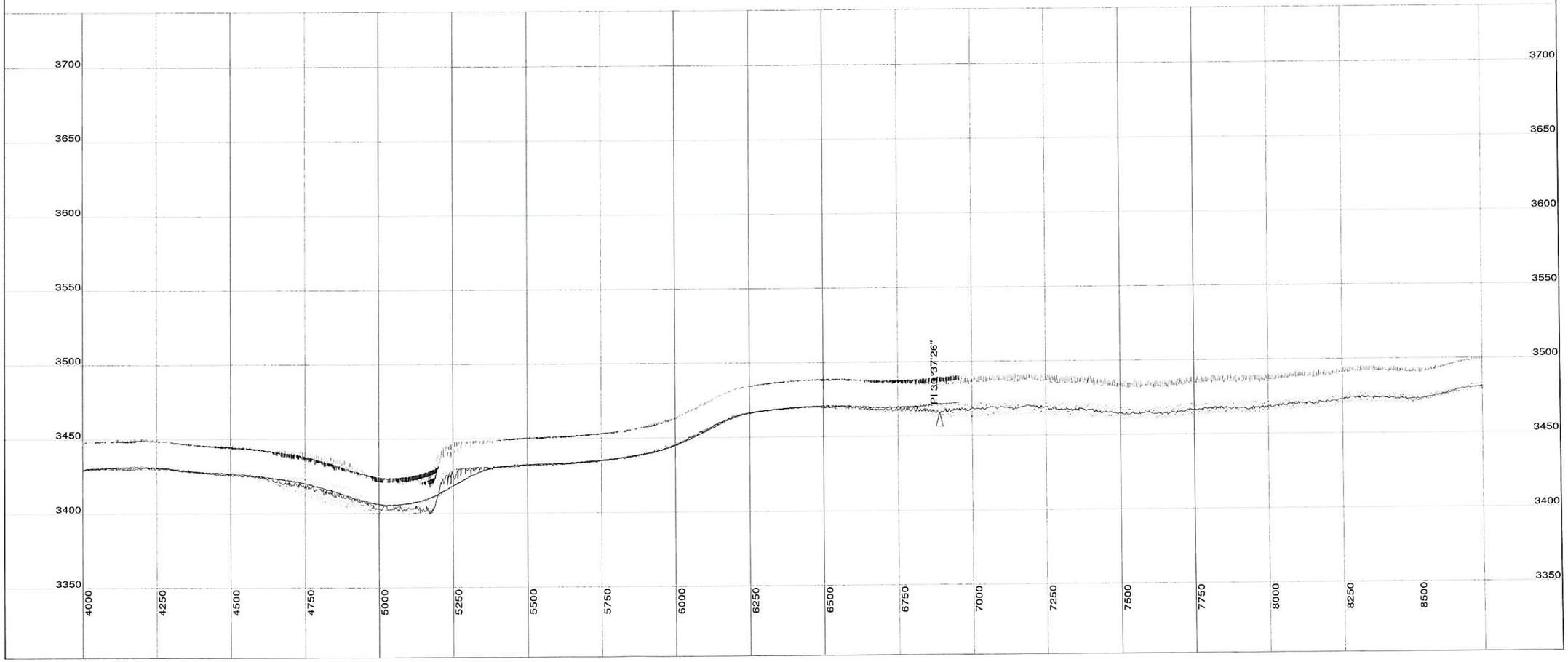

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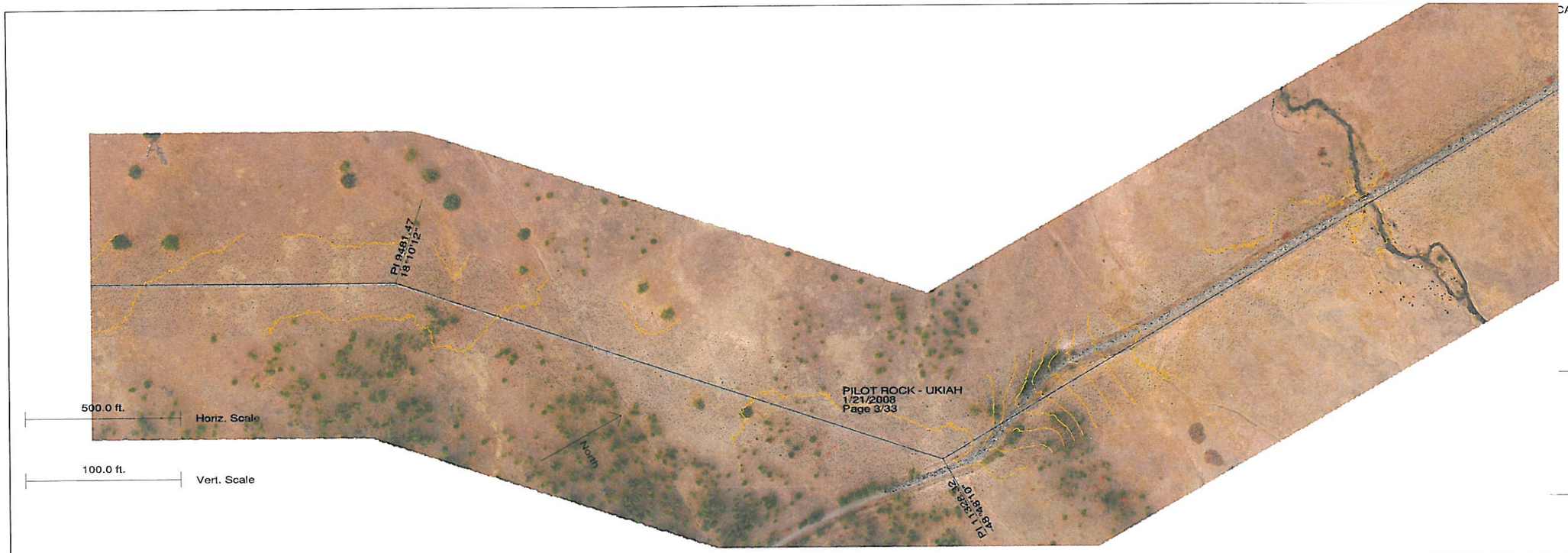

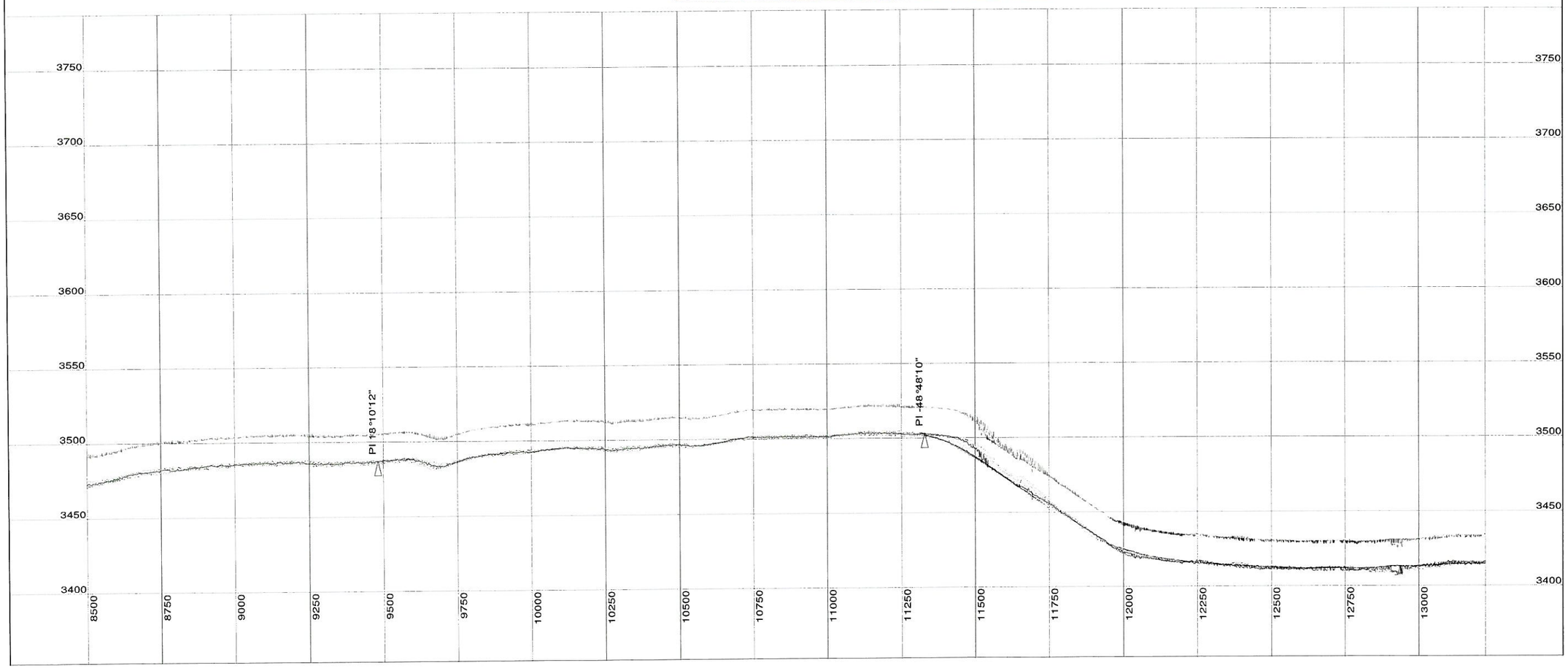

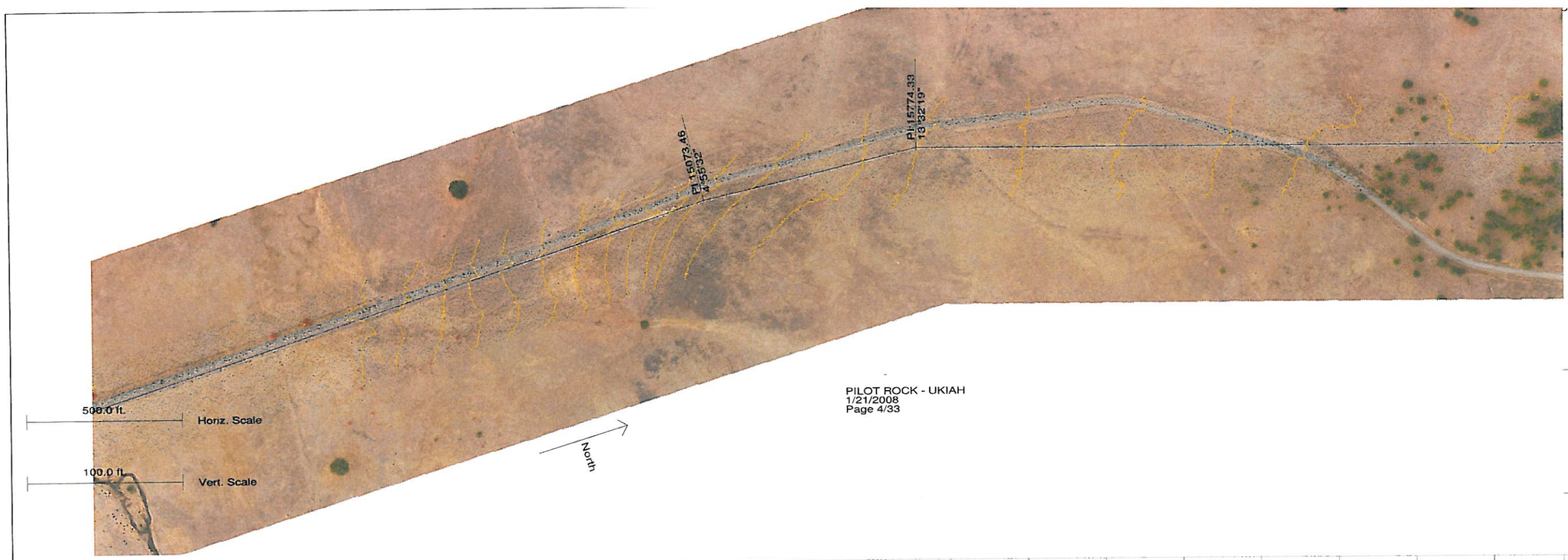

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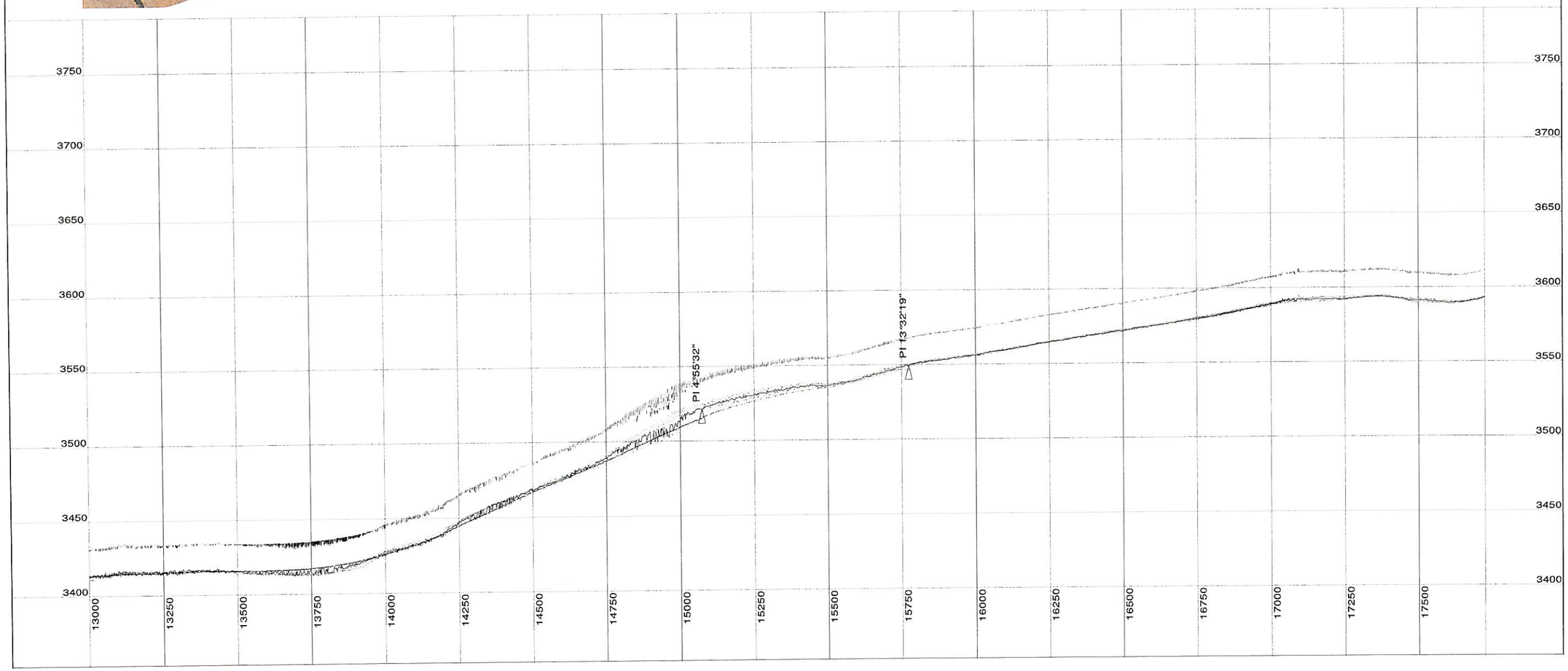

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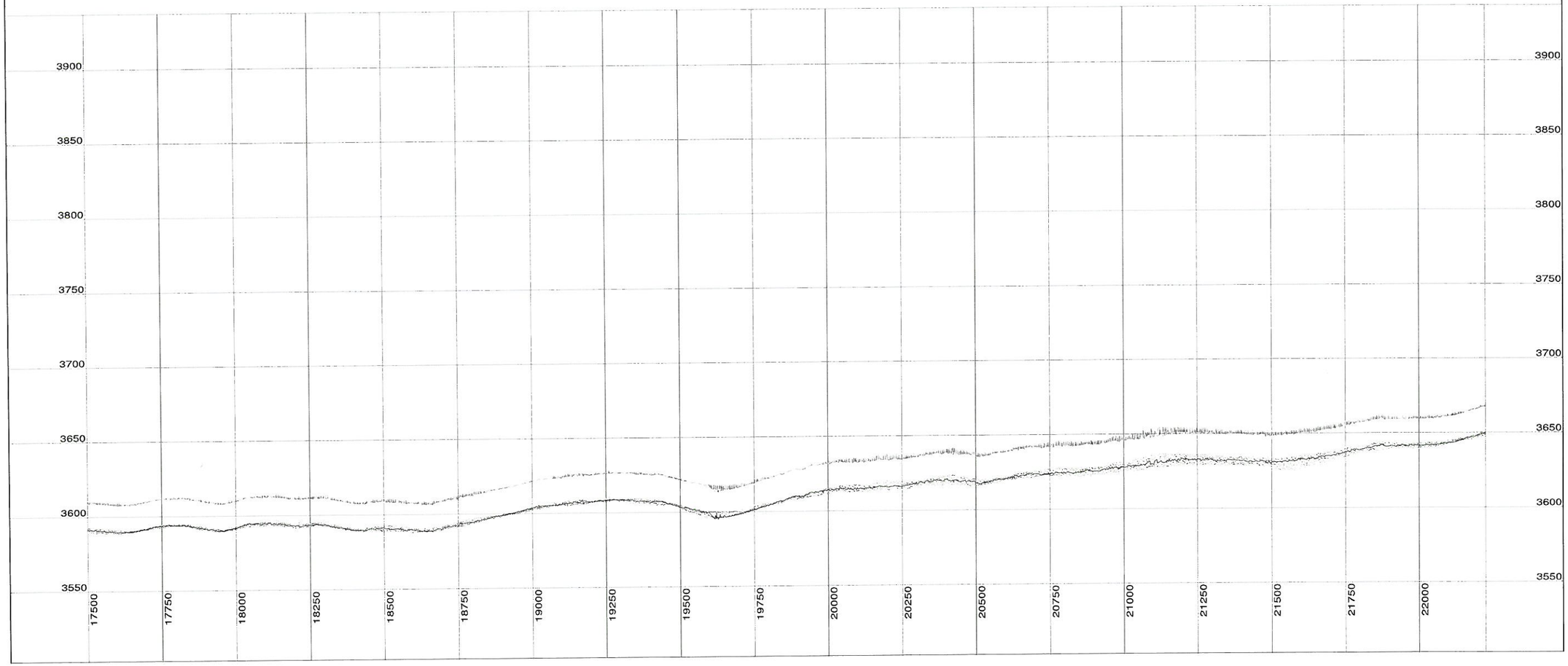

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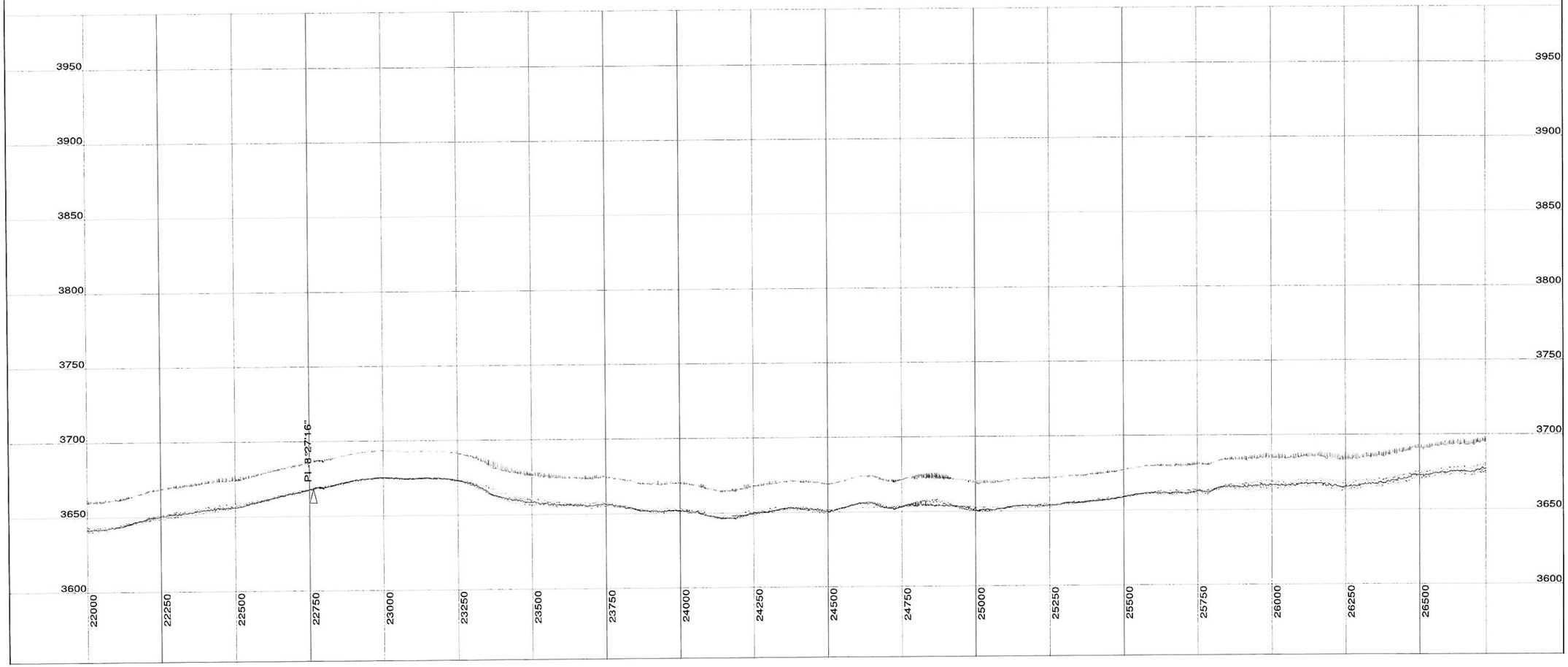

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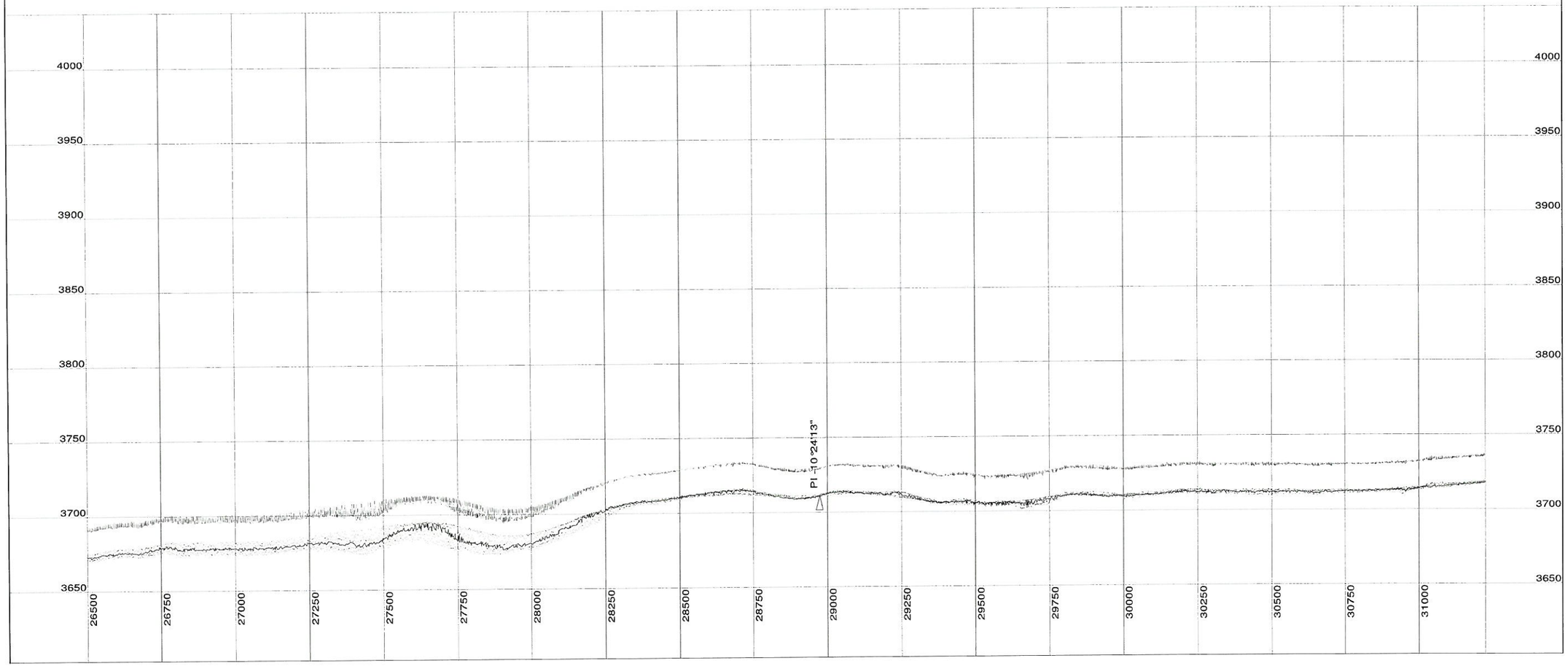

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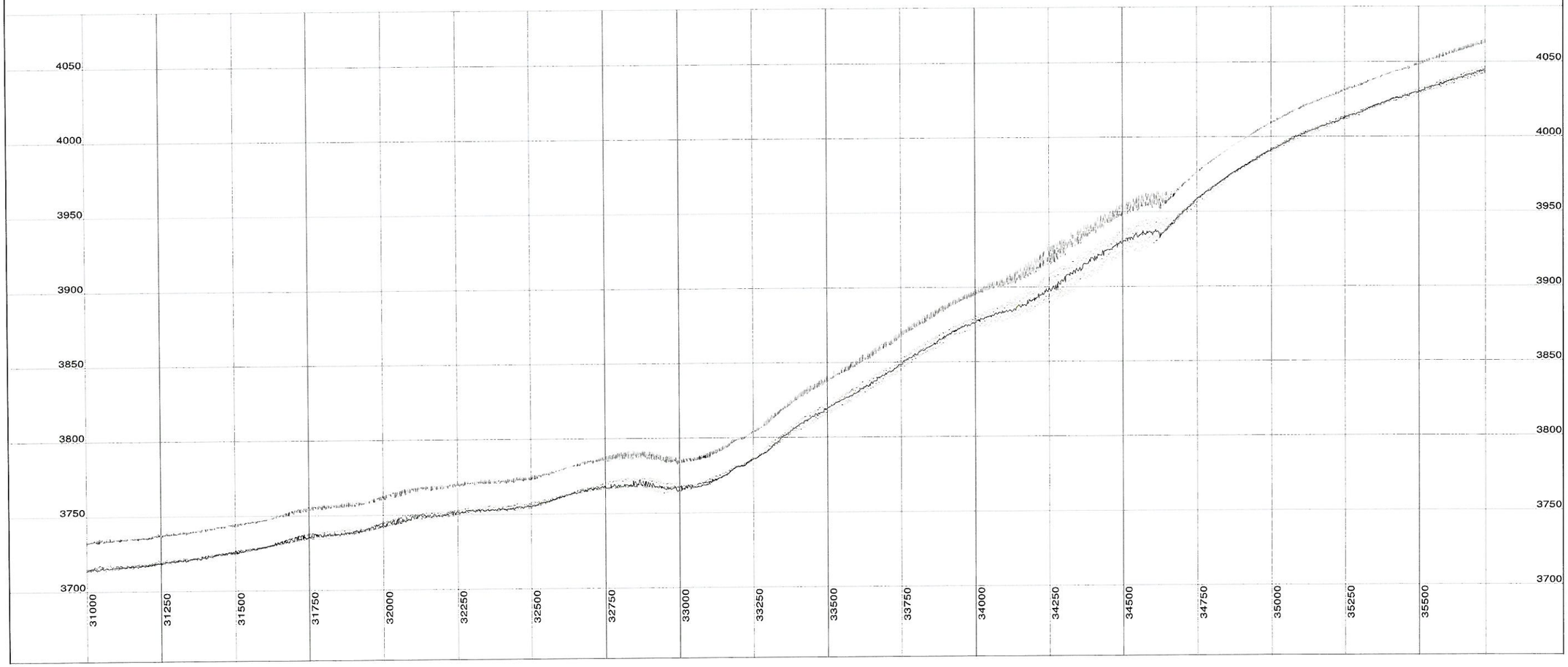
North



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1/21/2008
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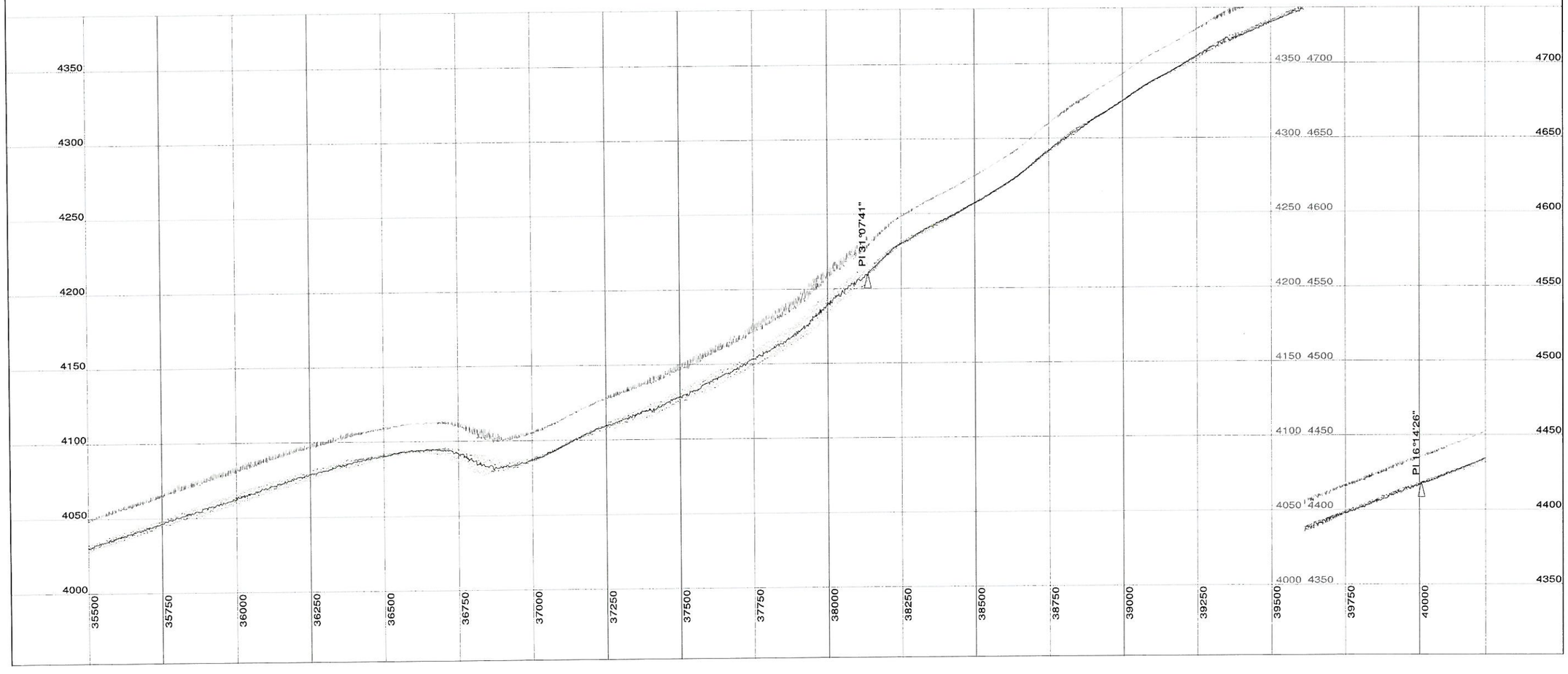

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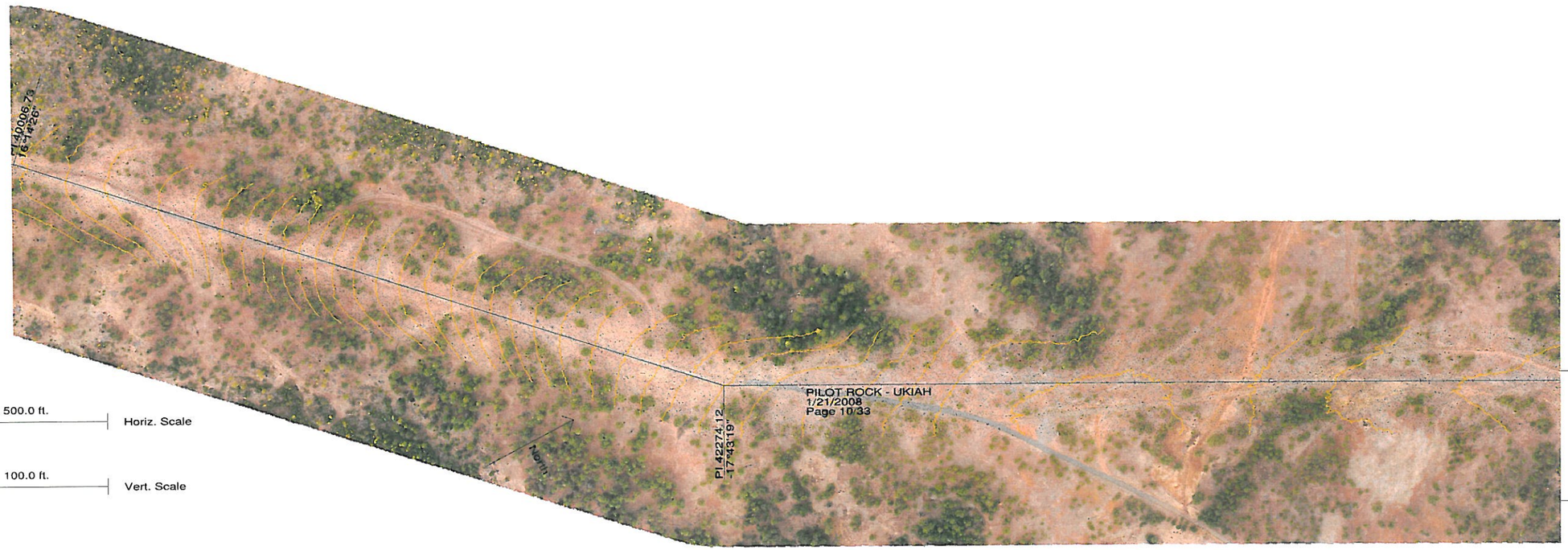

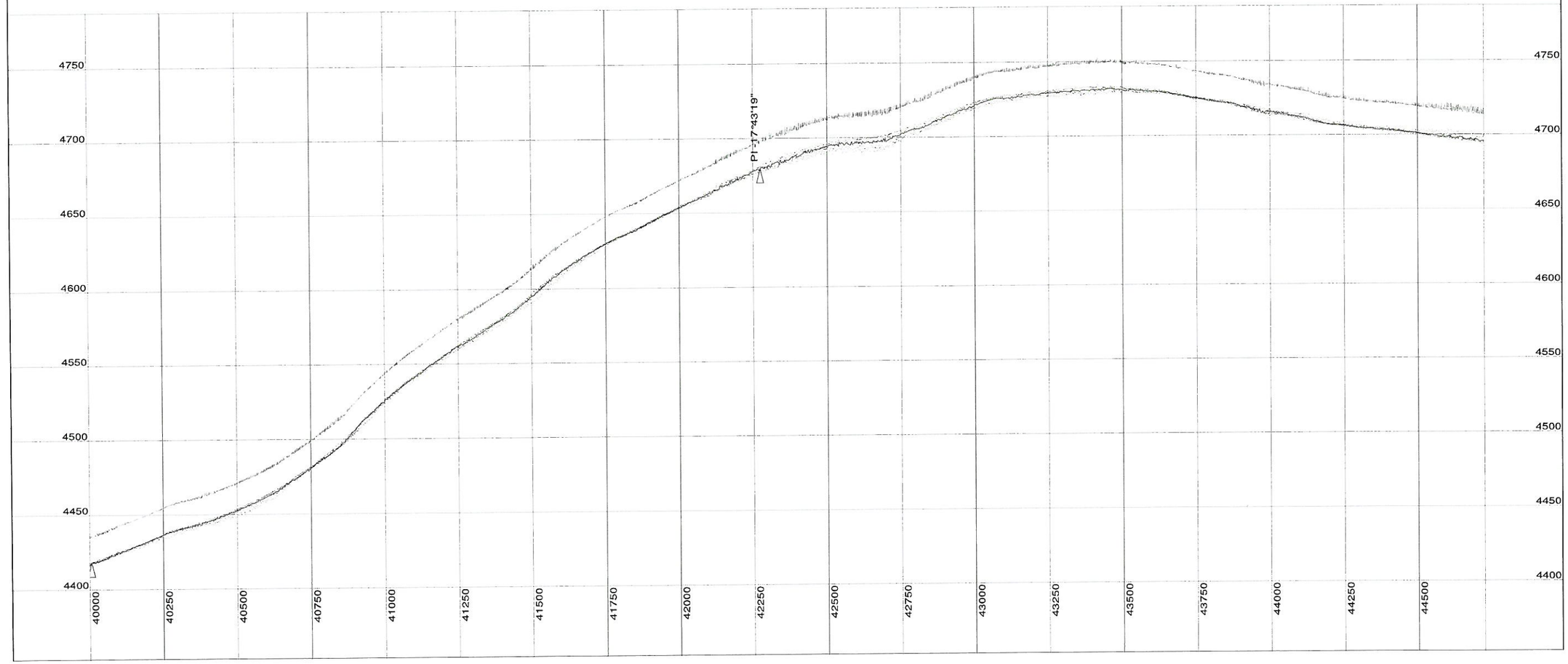

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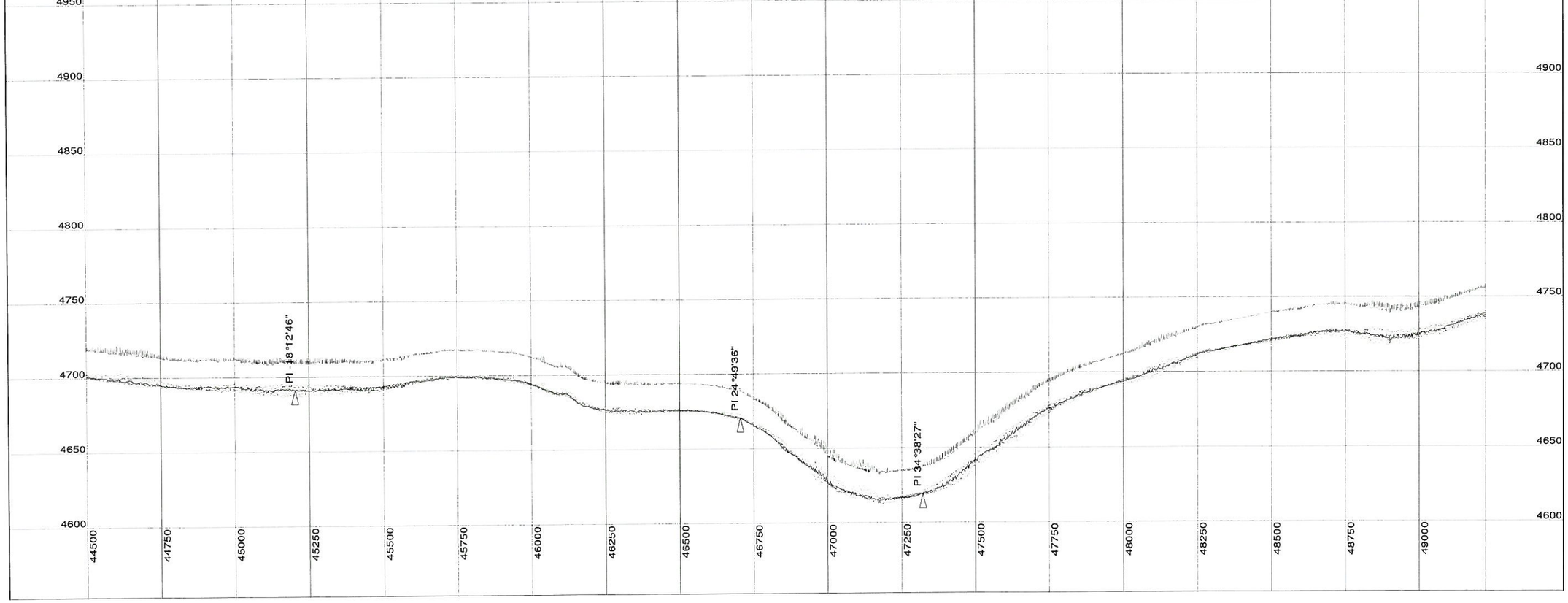

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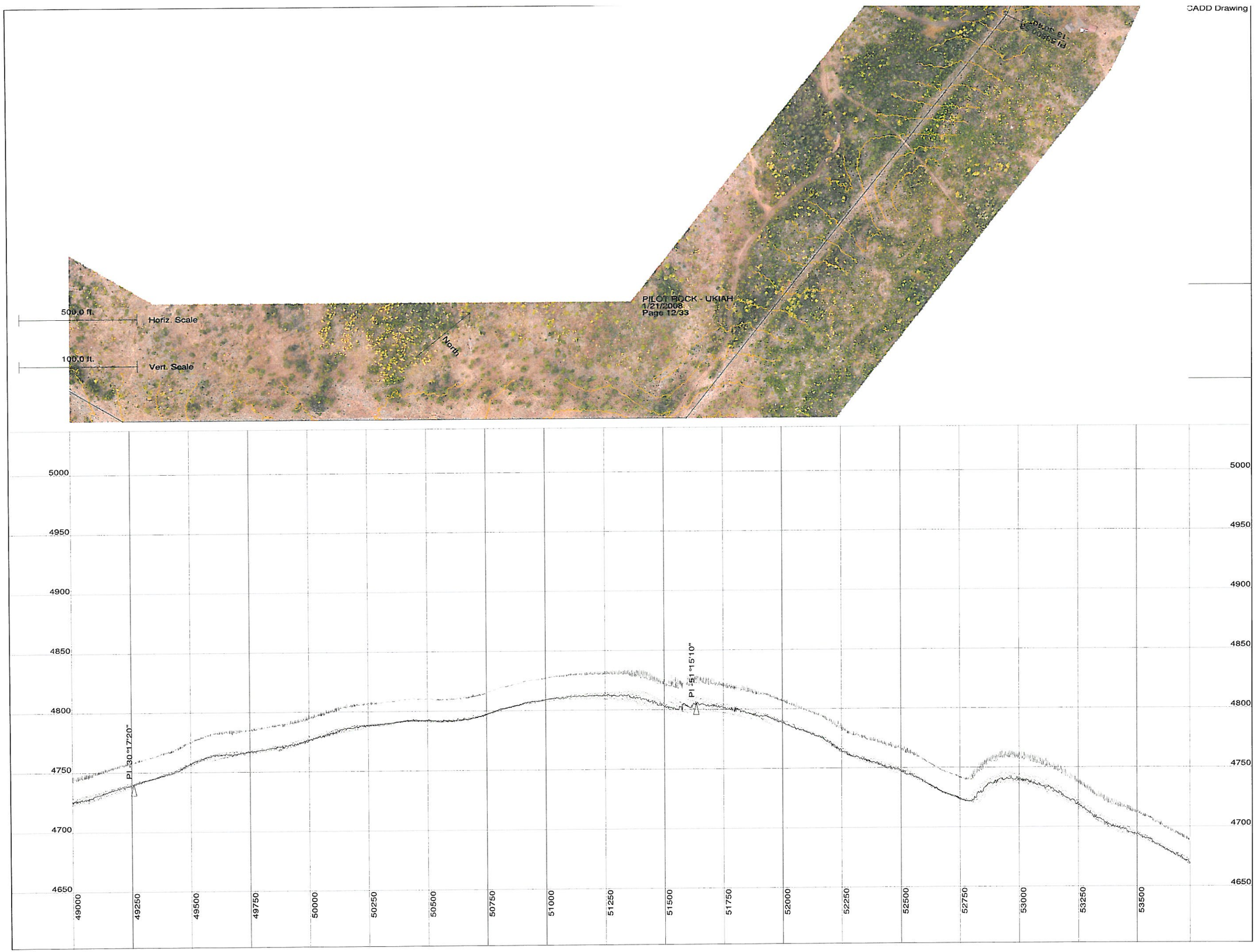

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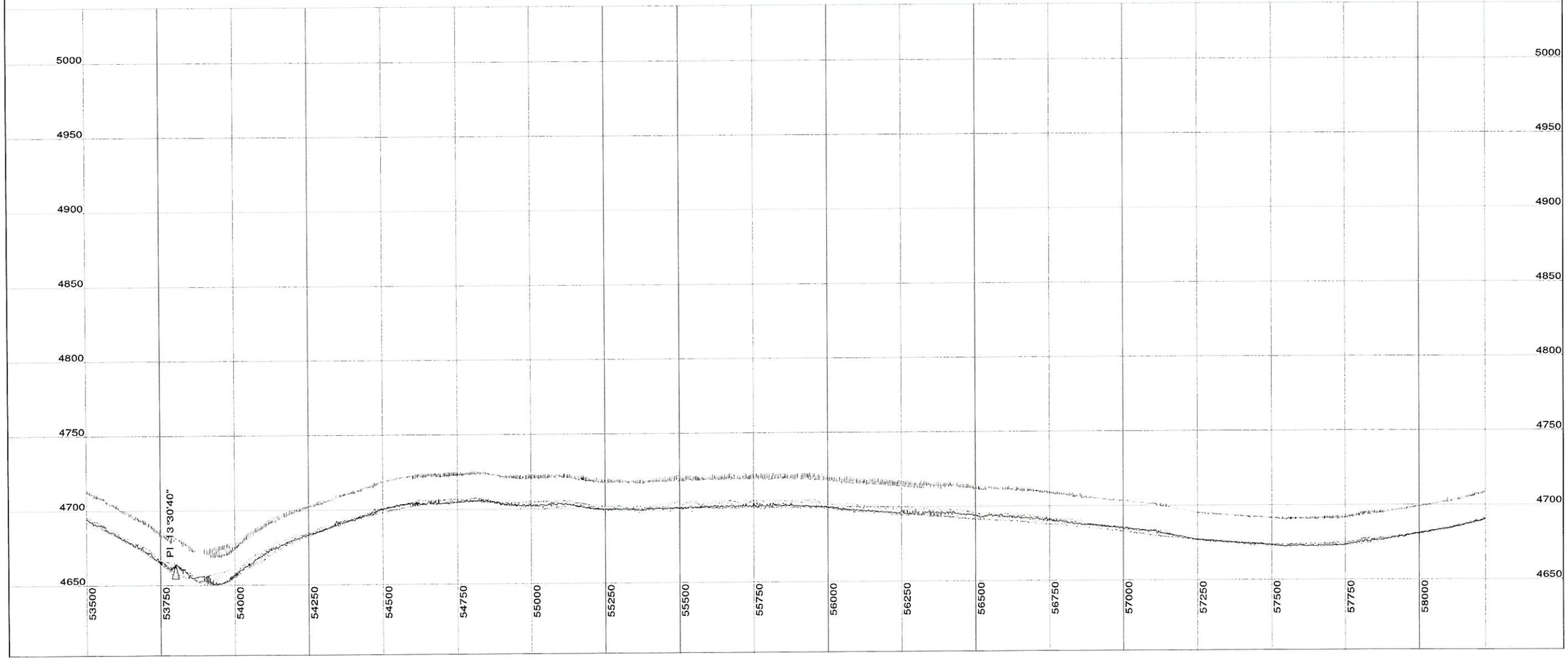

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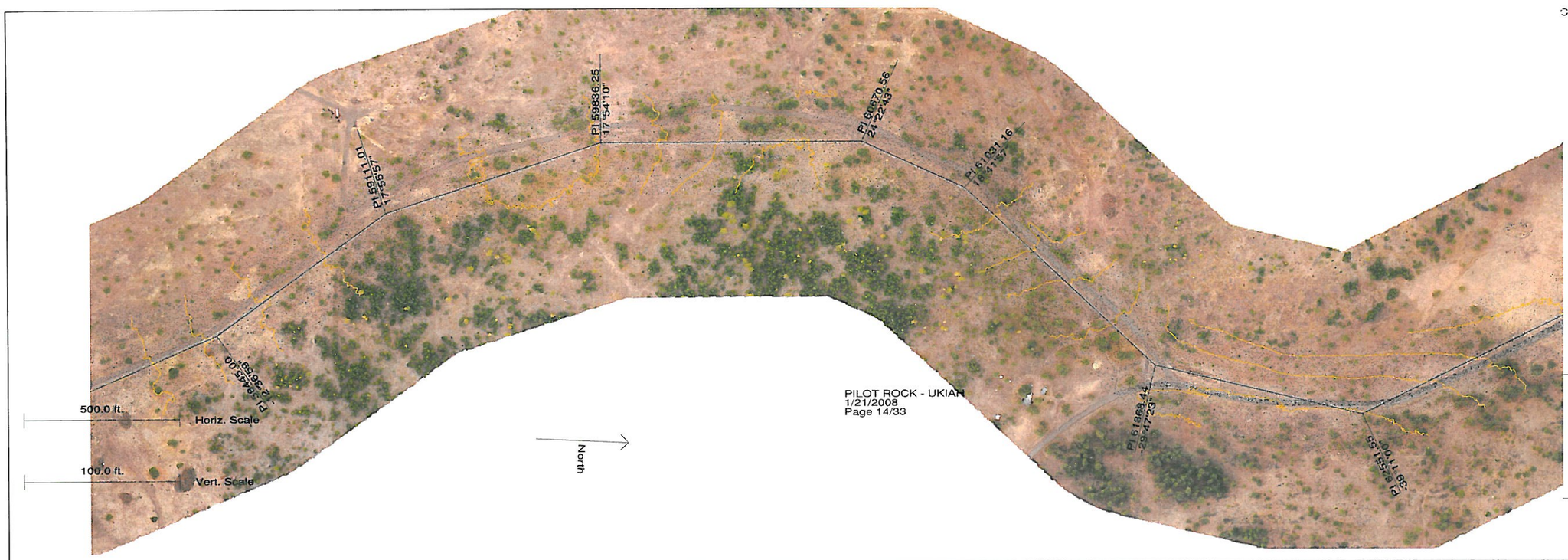

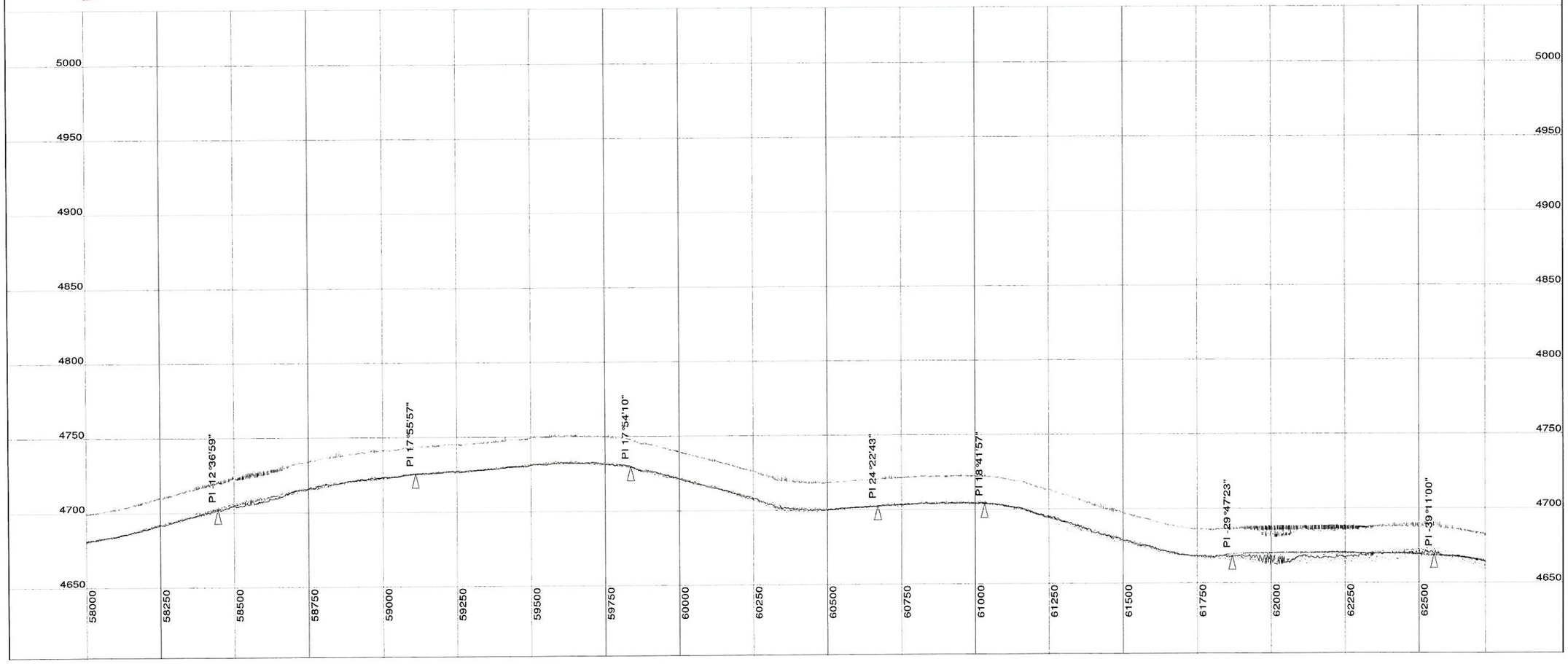

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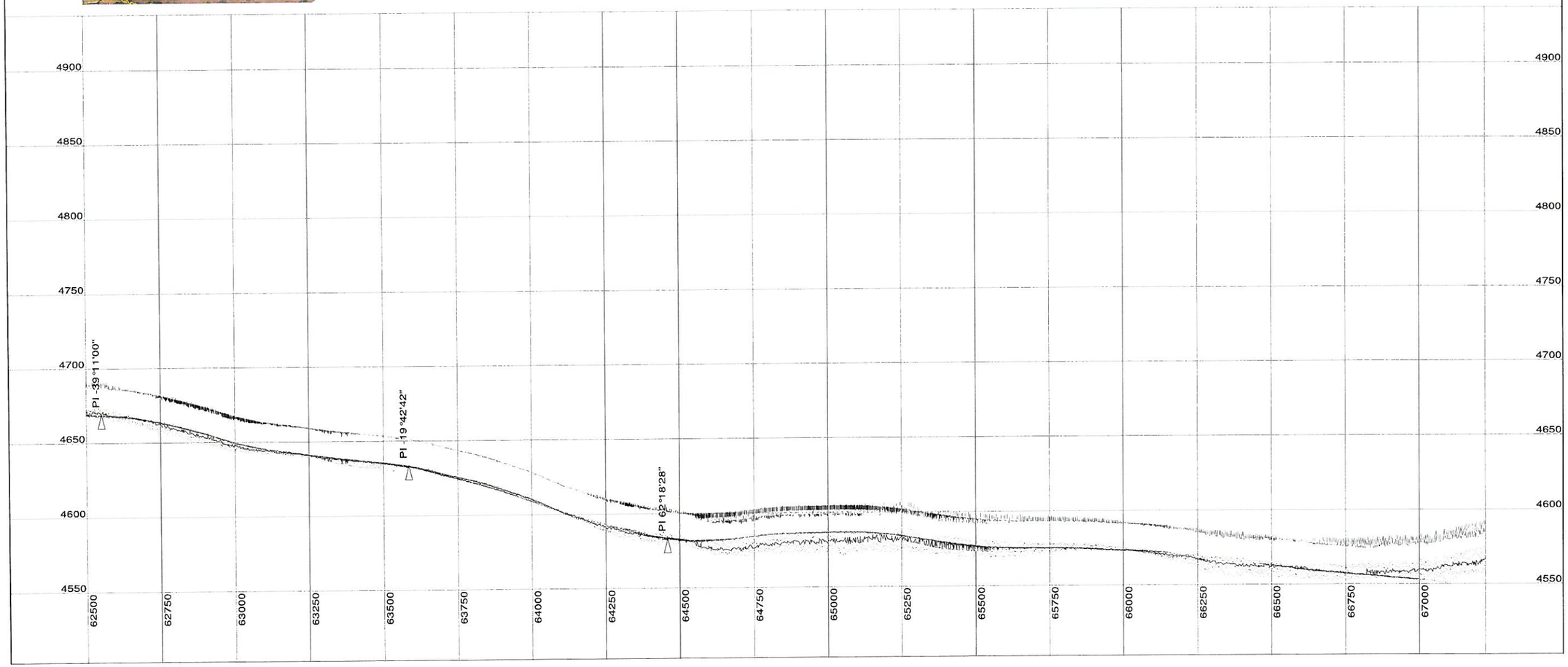

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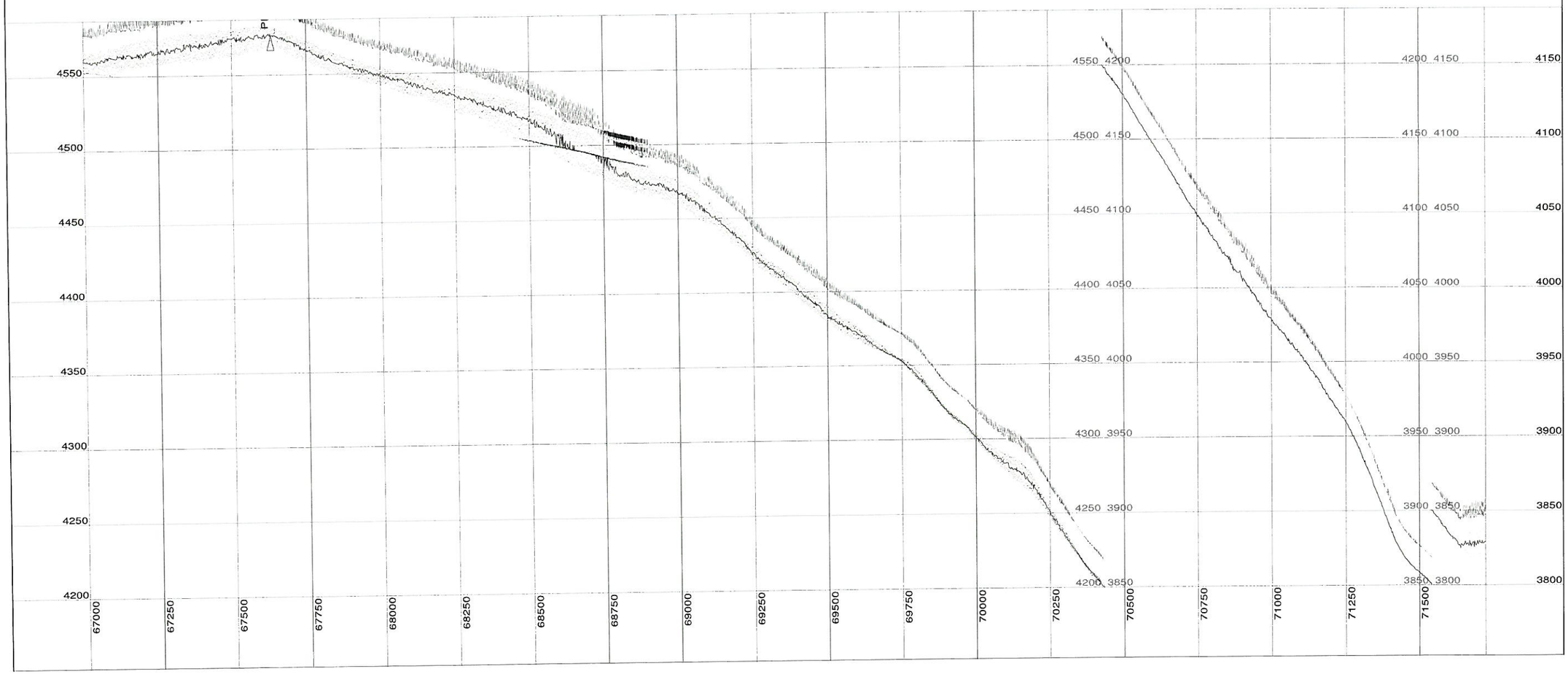

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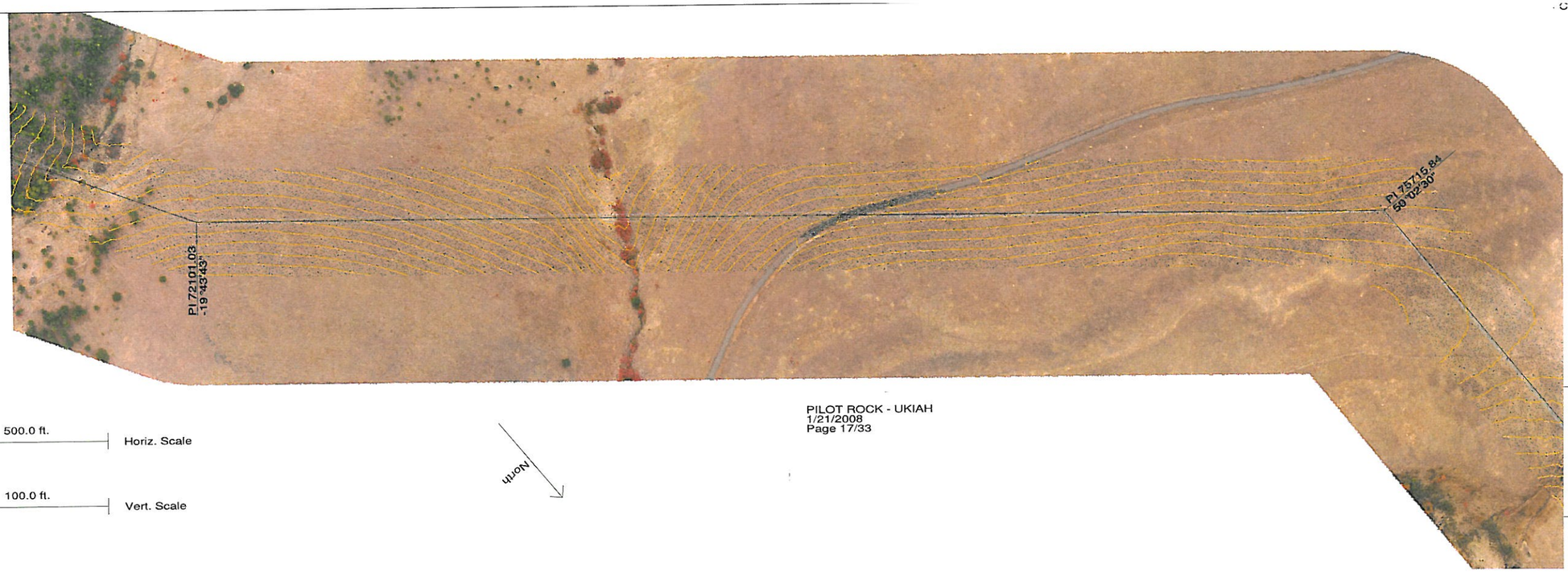

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PILOT ROCK - UKIAH
1/21/2008
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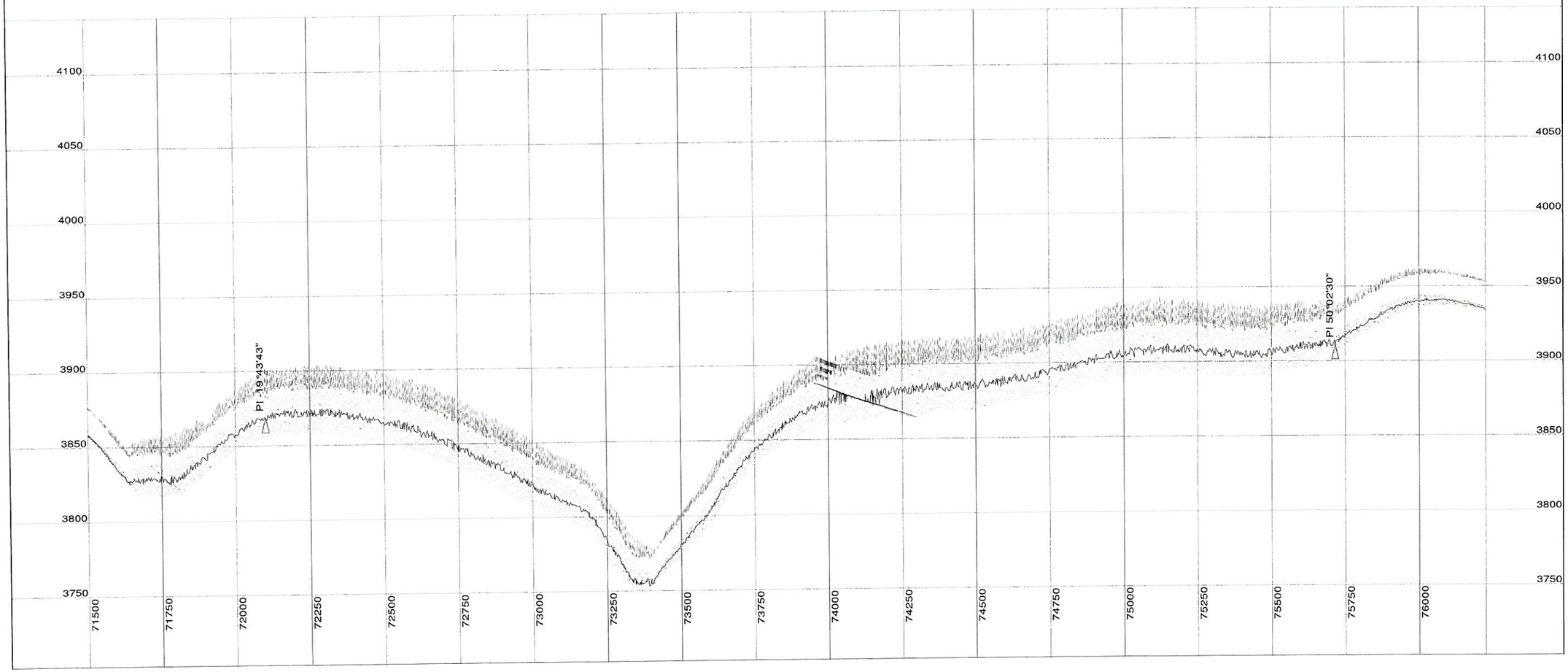

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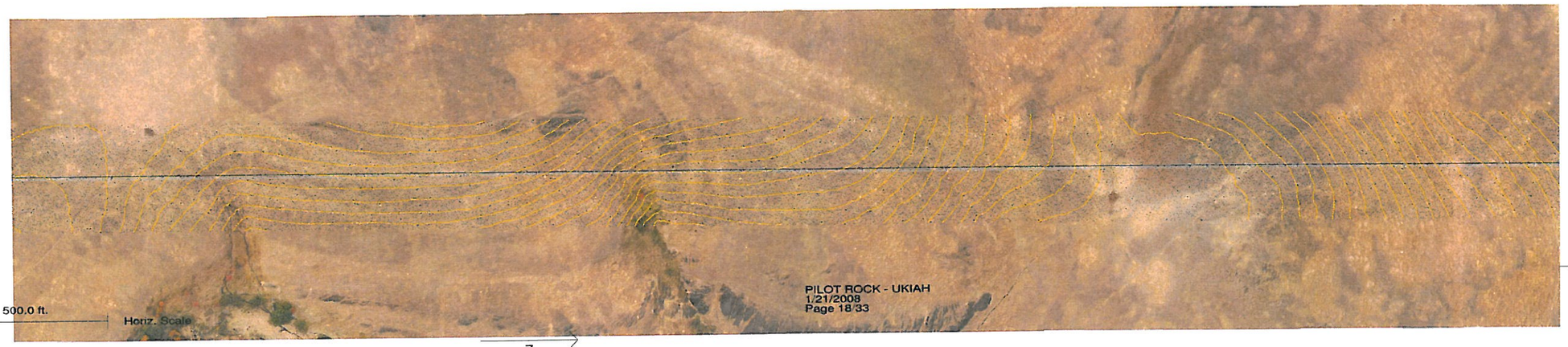

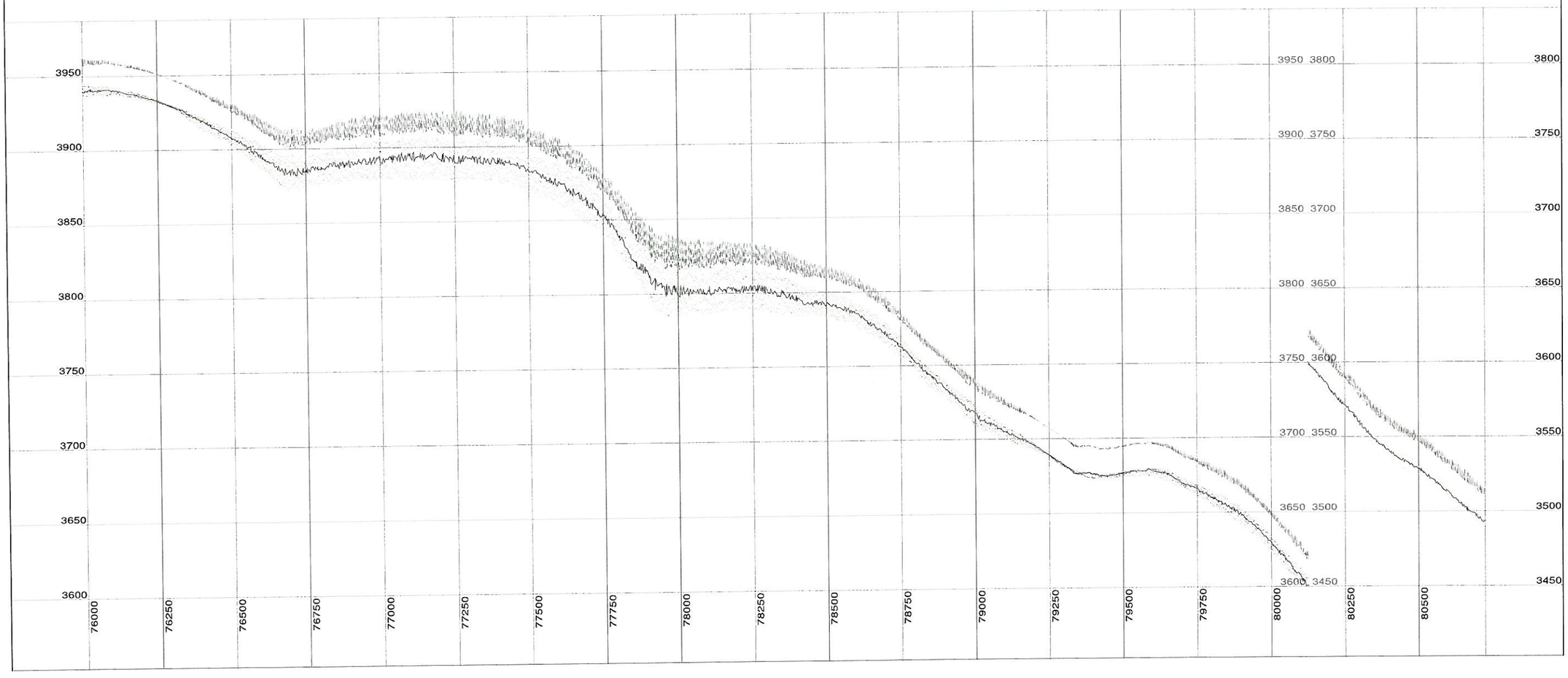

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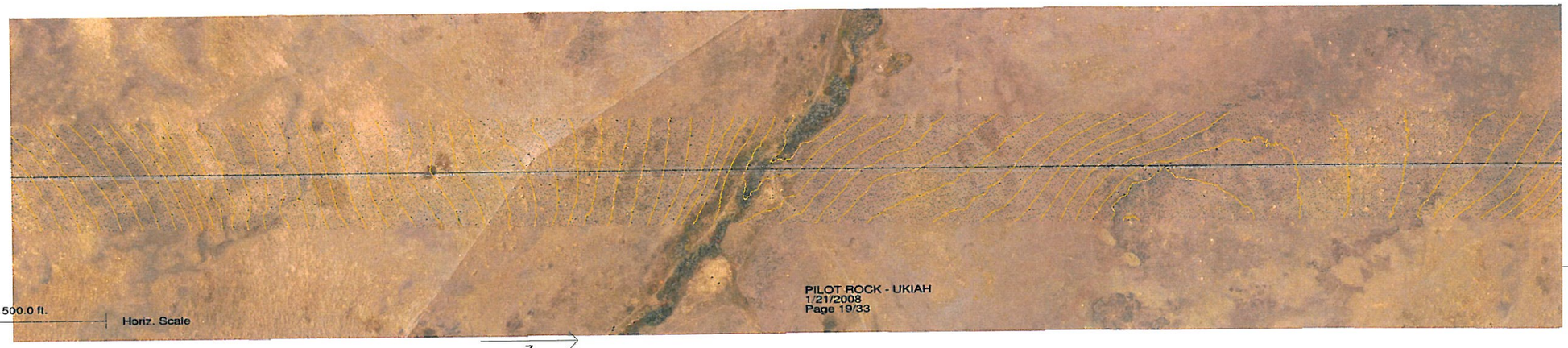

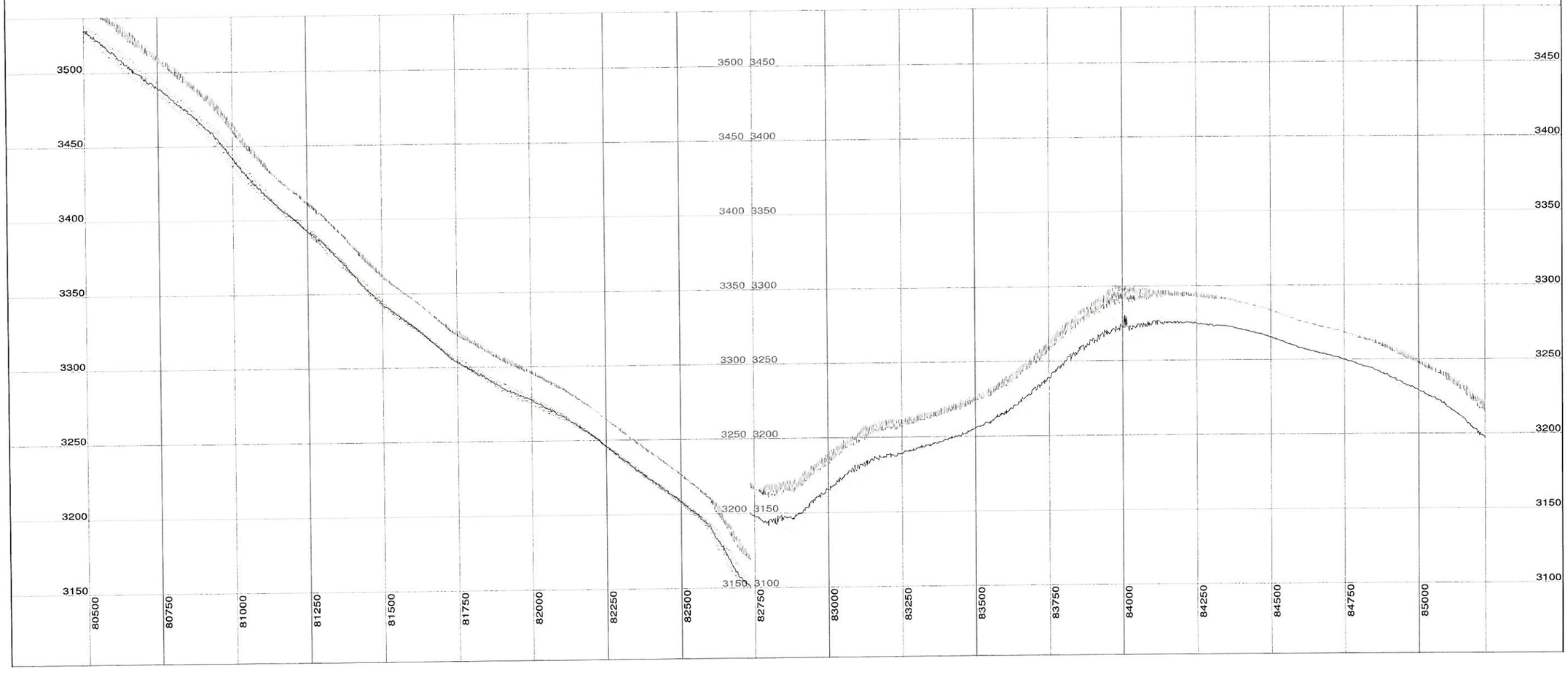

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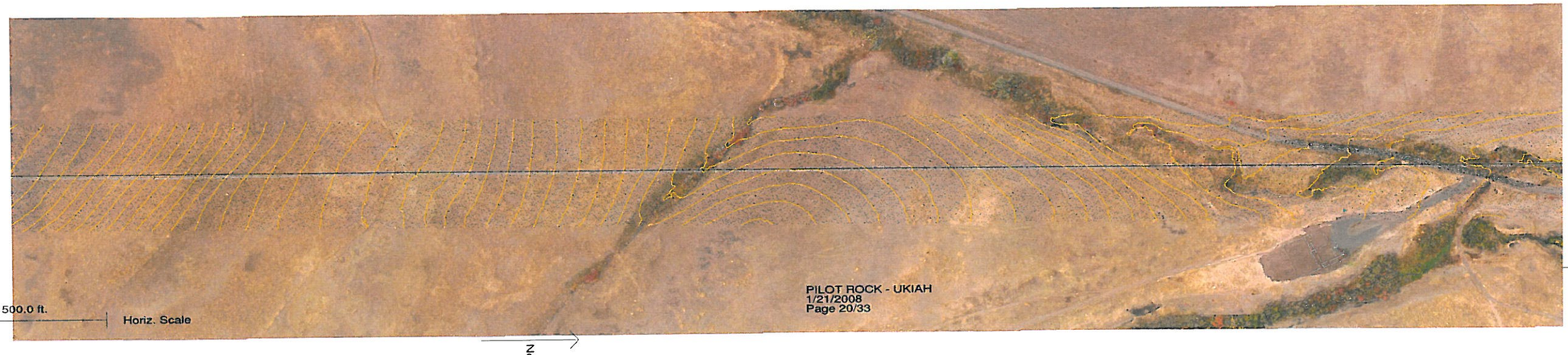

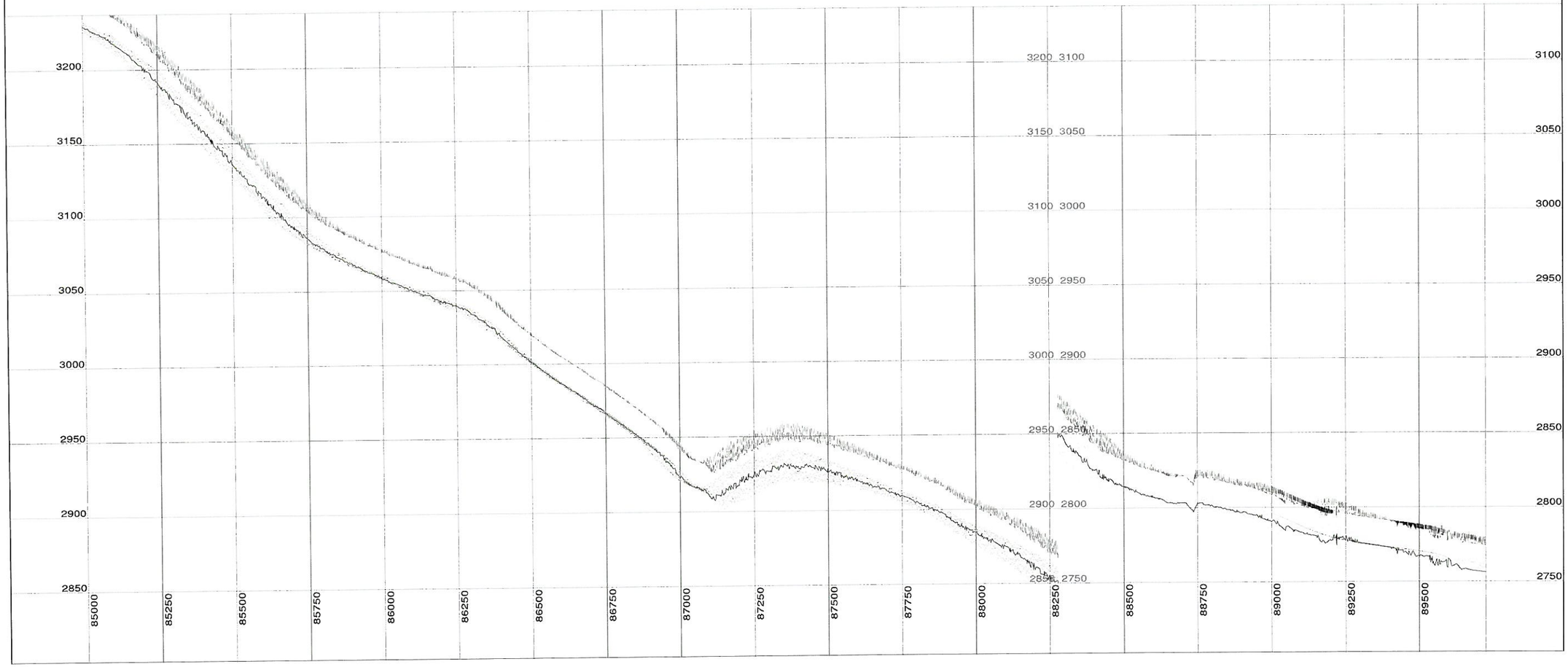

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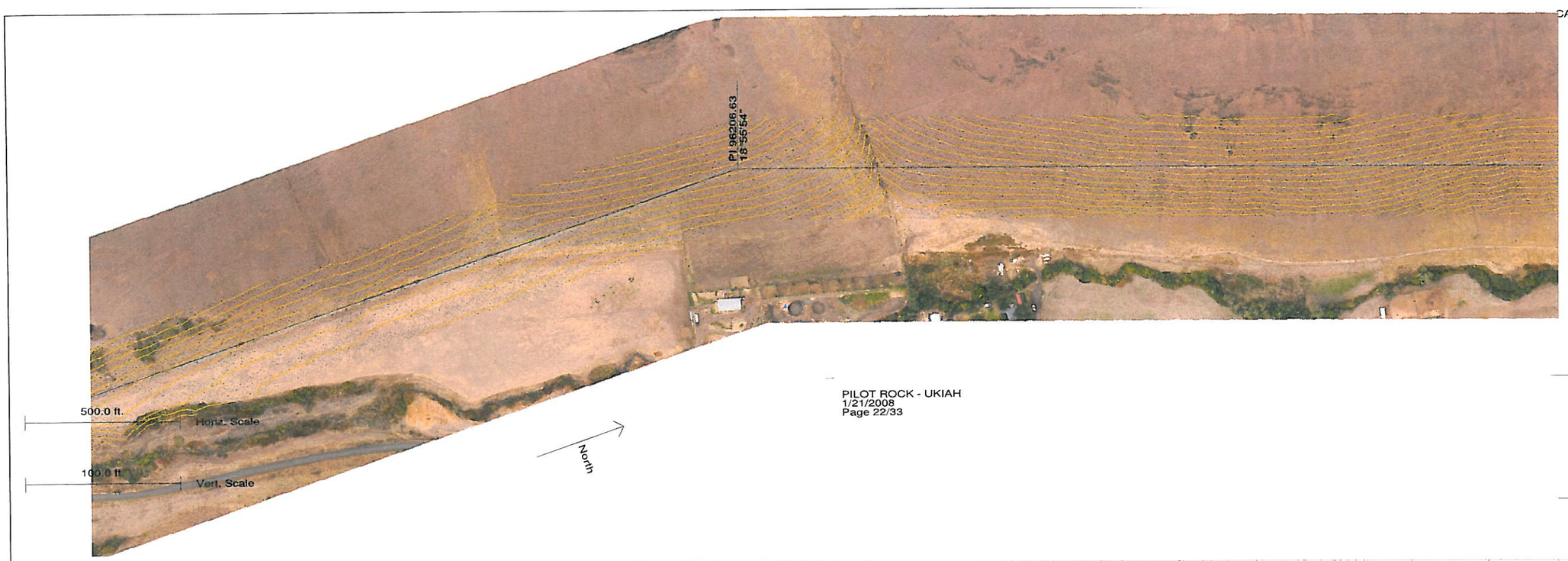

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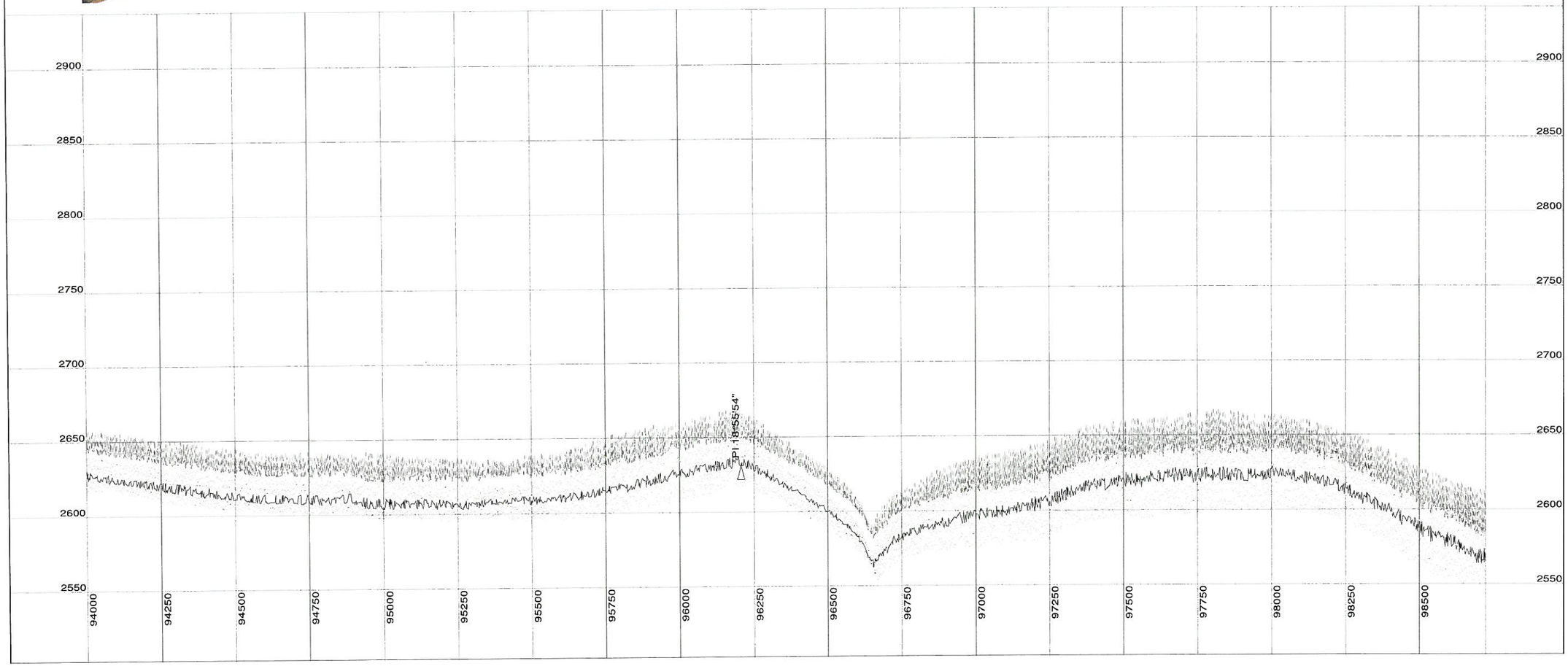

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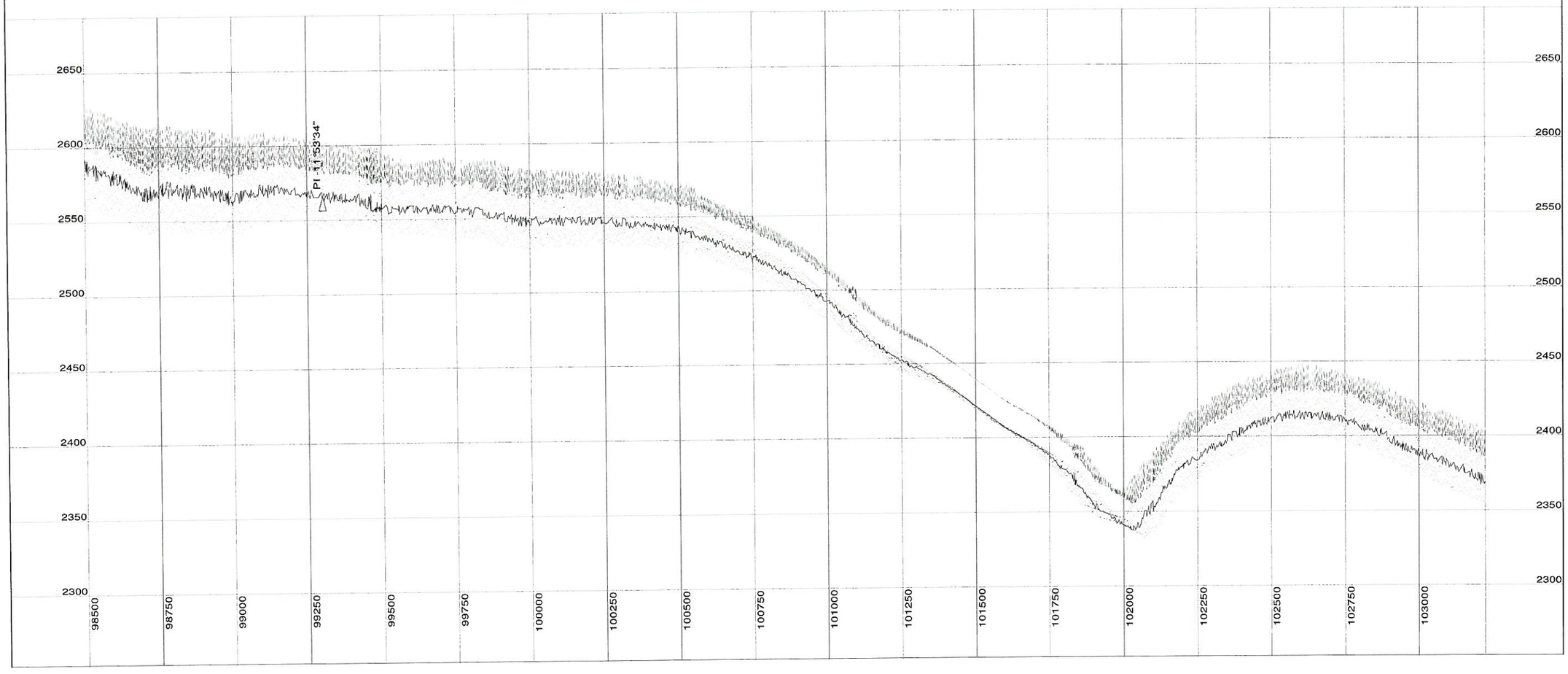

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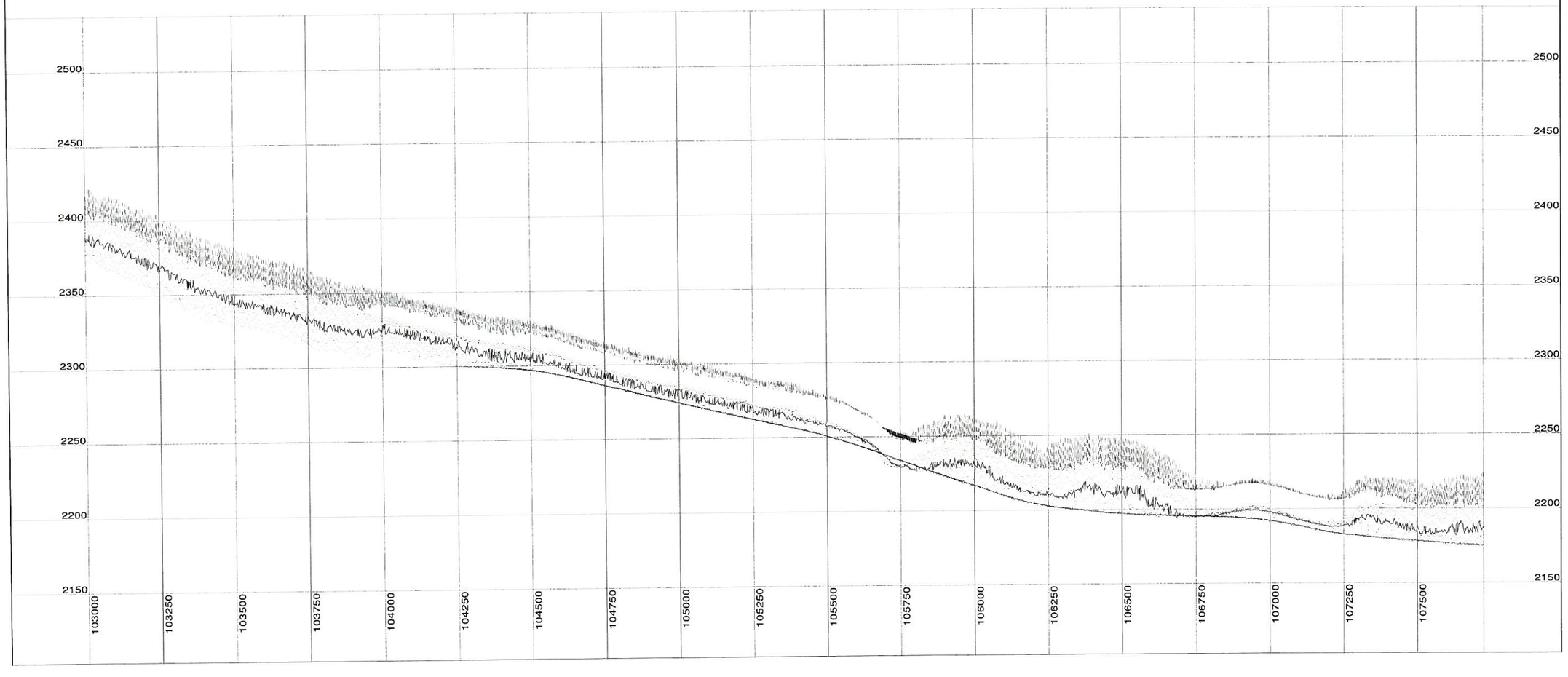

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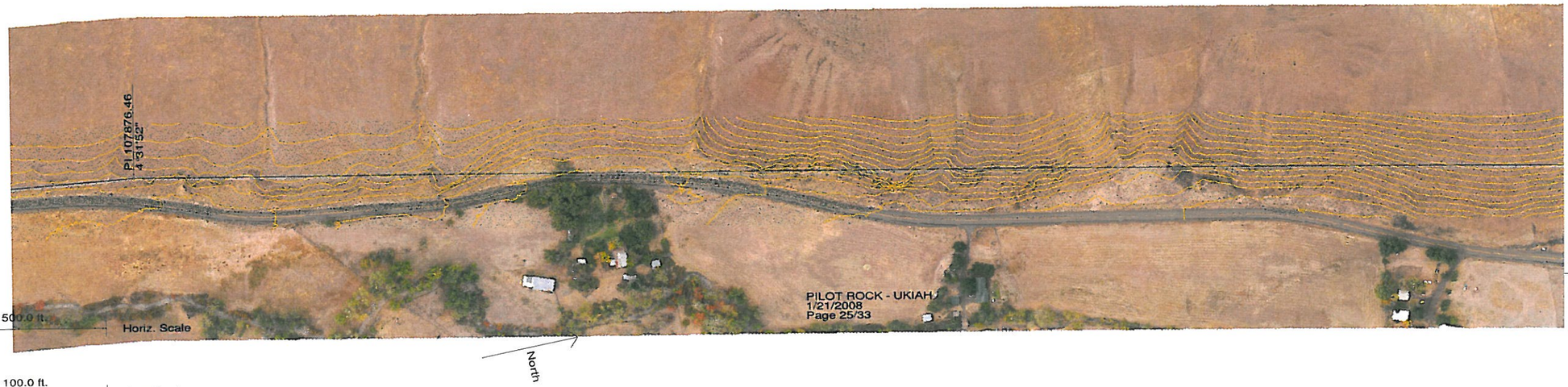

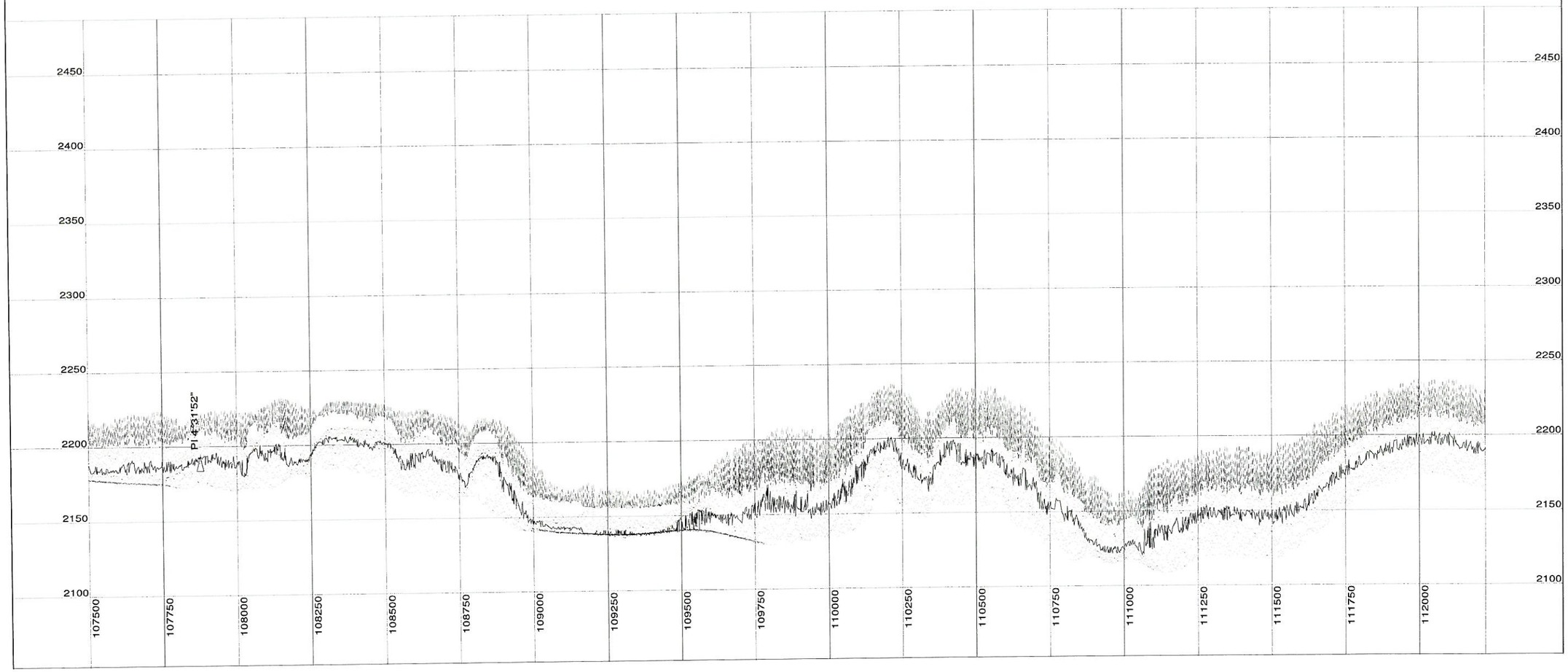

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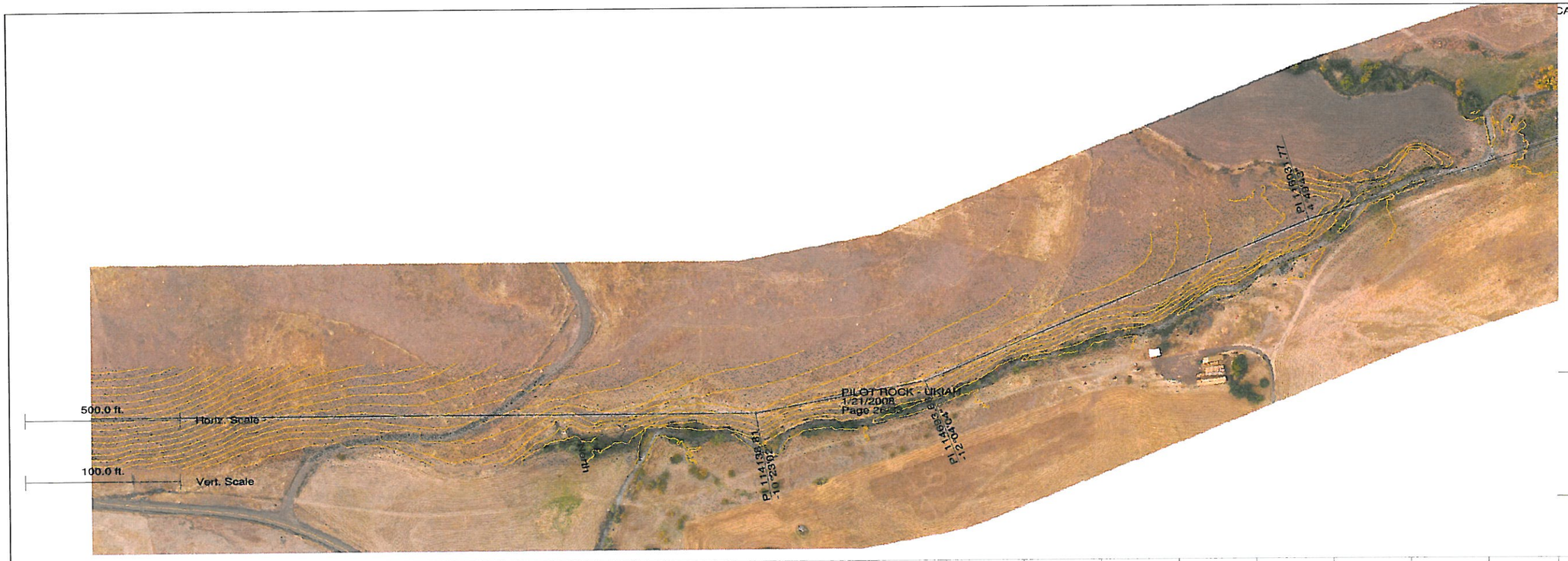

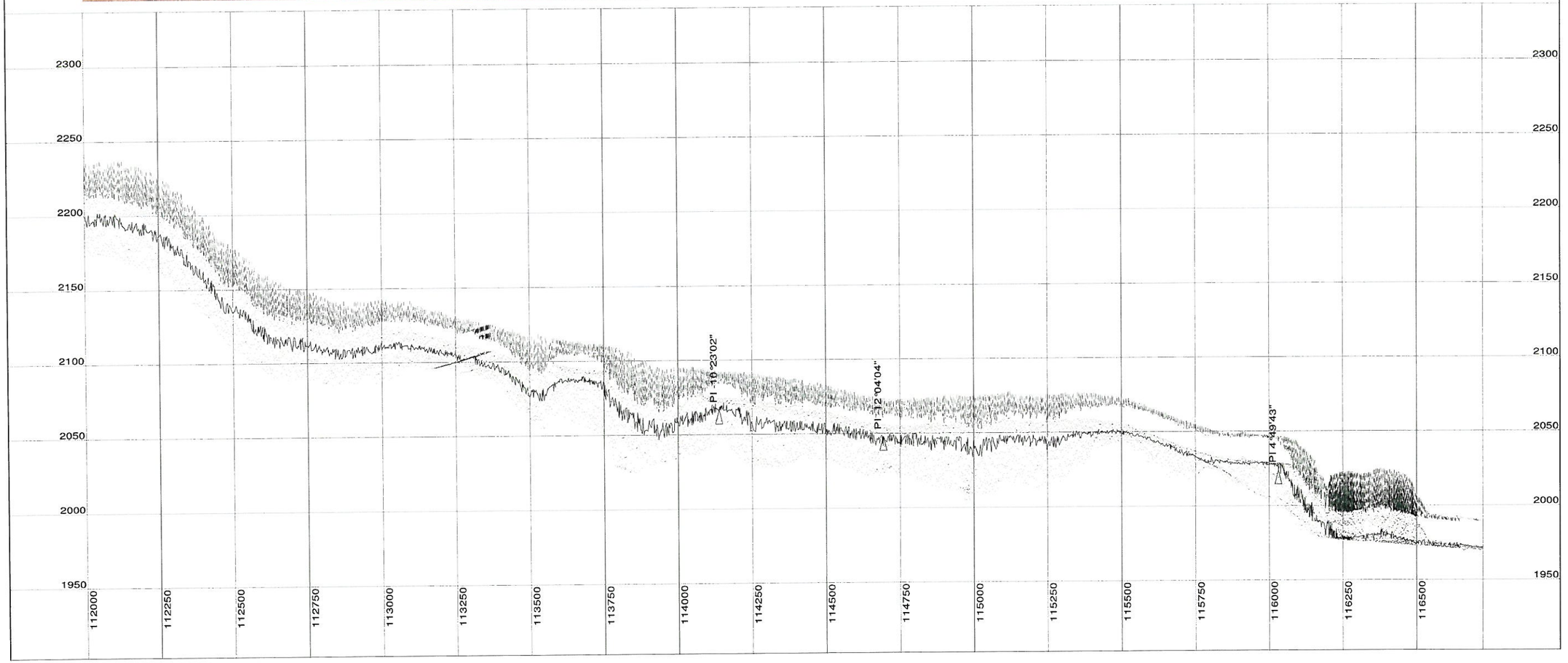

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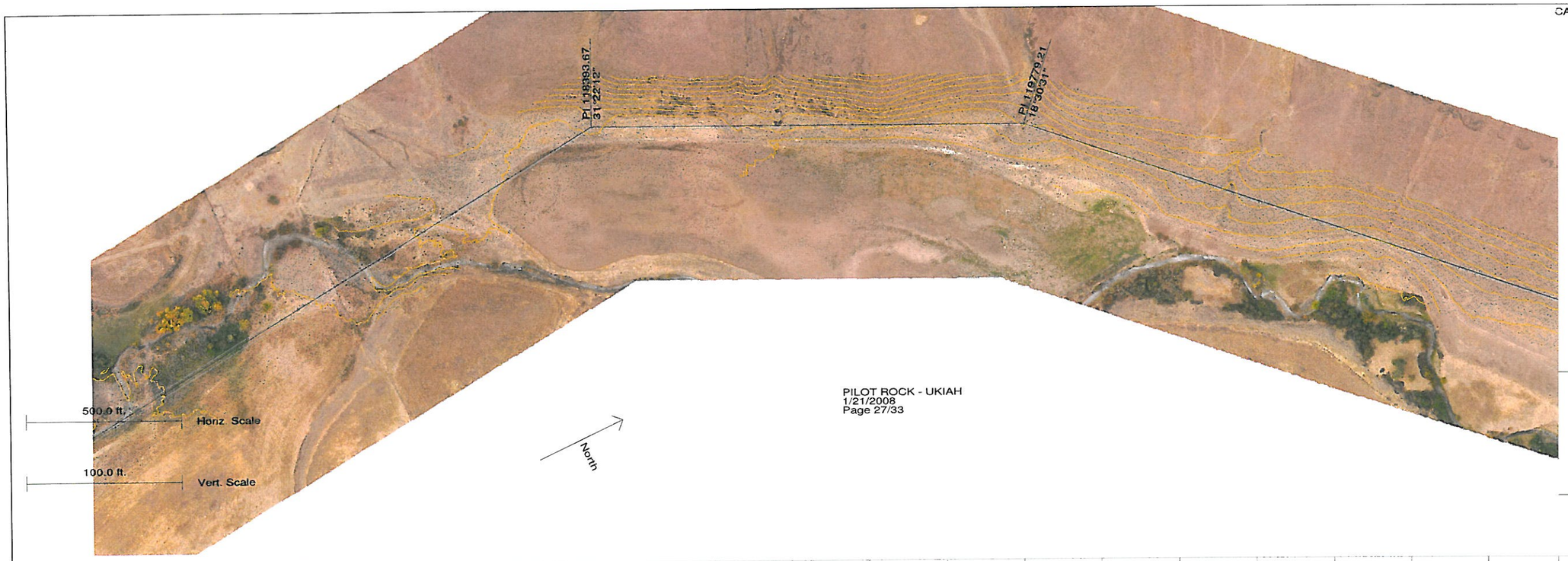

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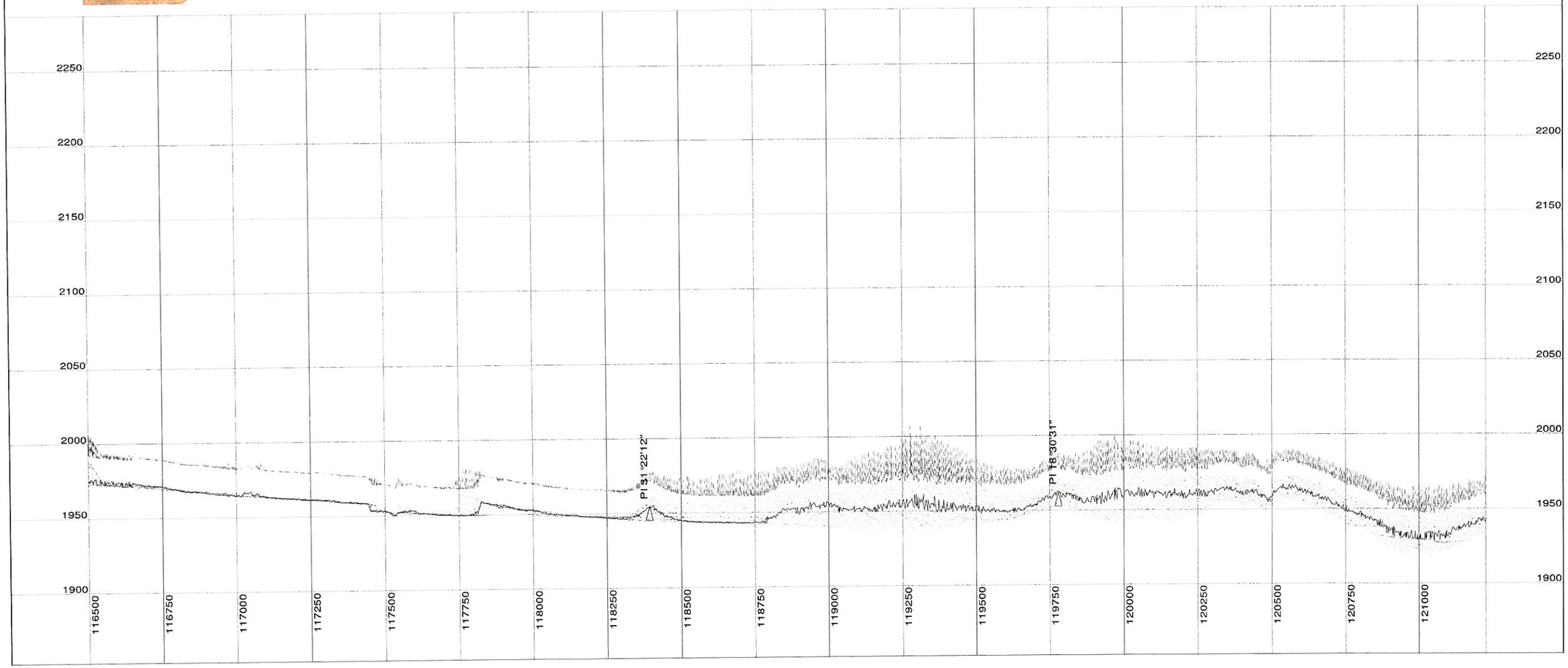

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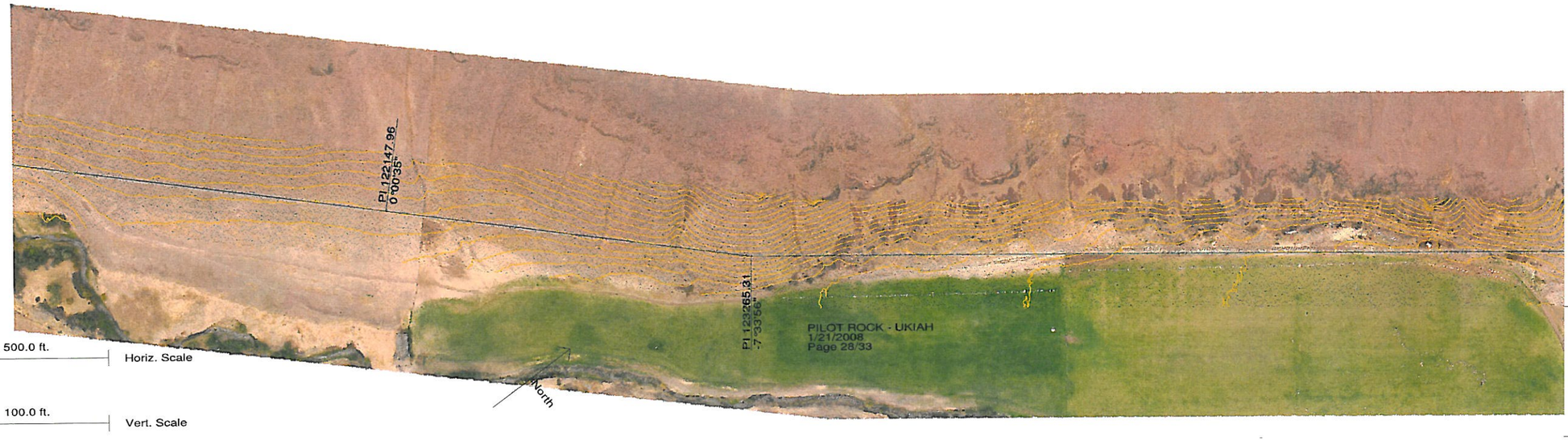

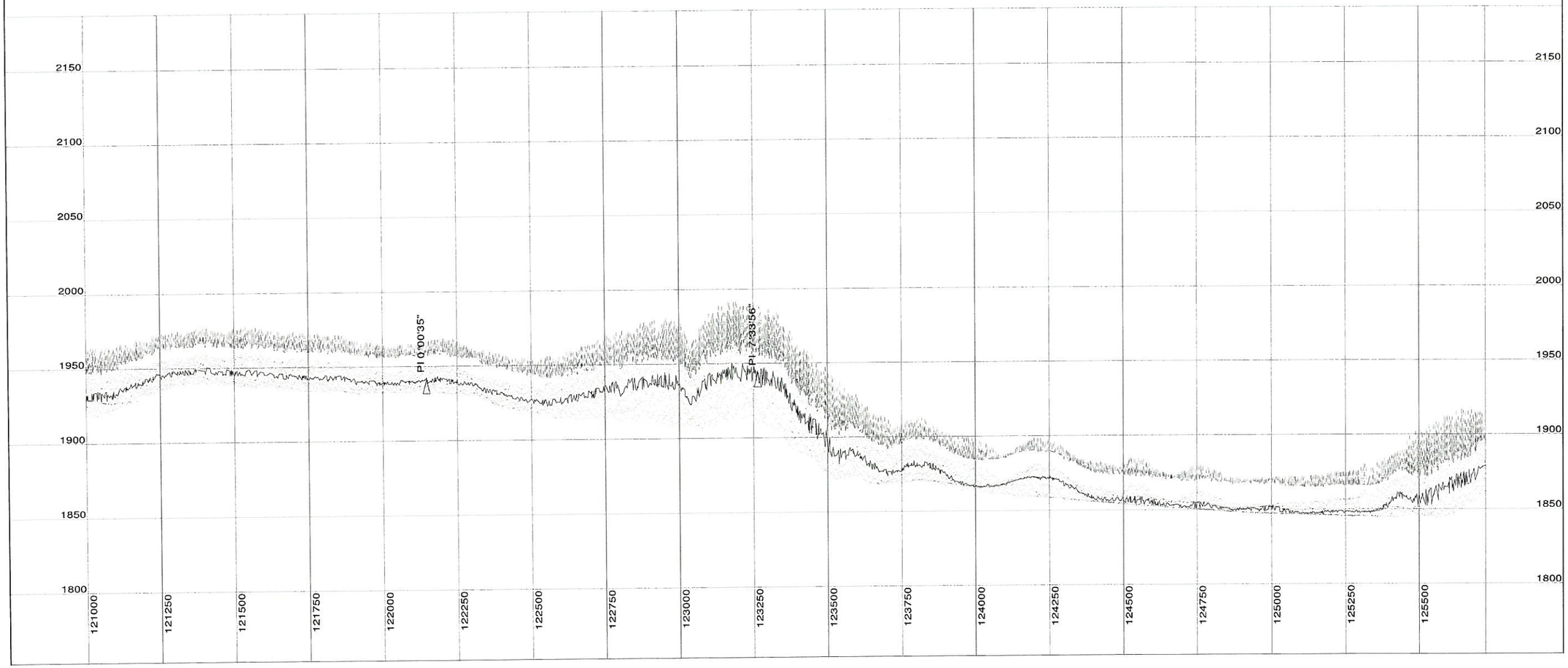

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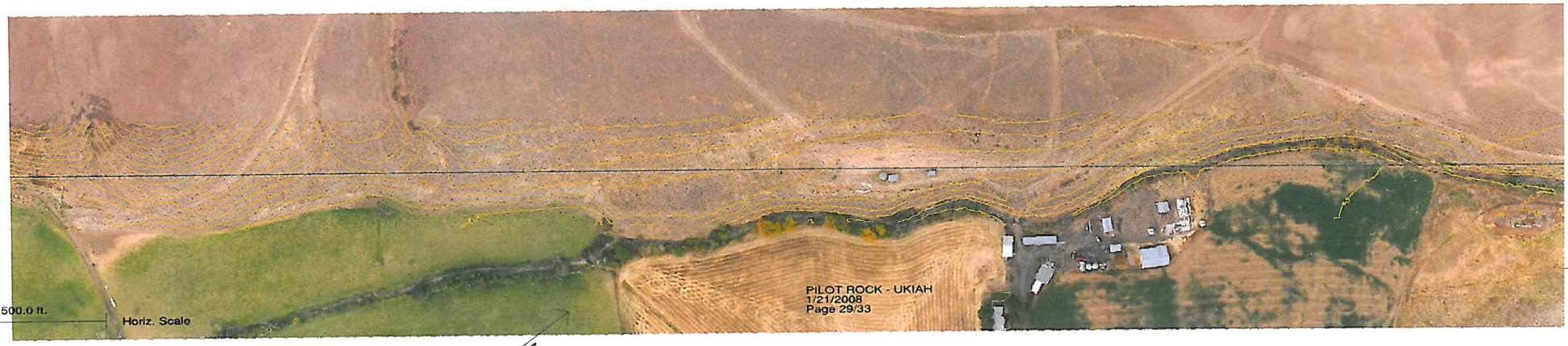

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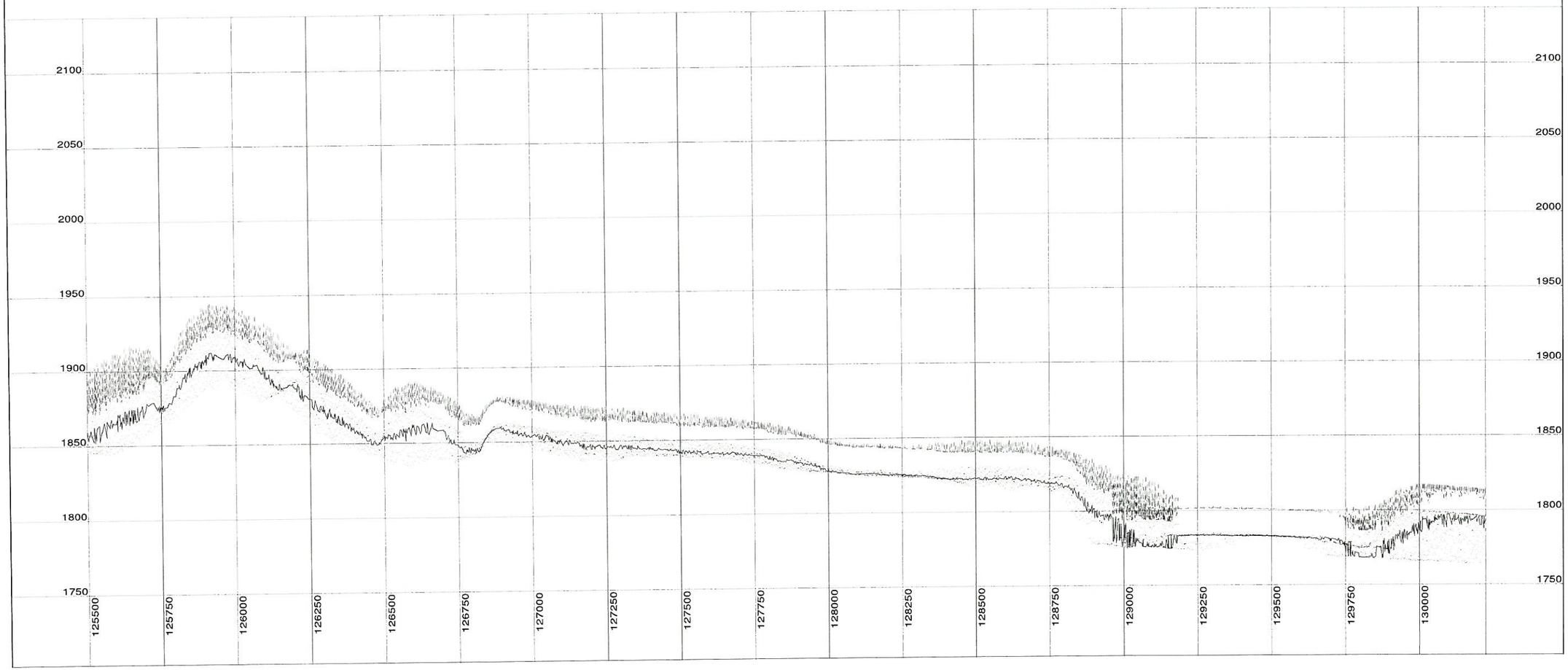

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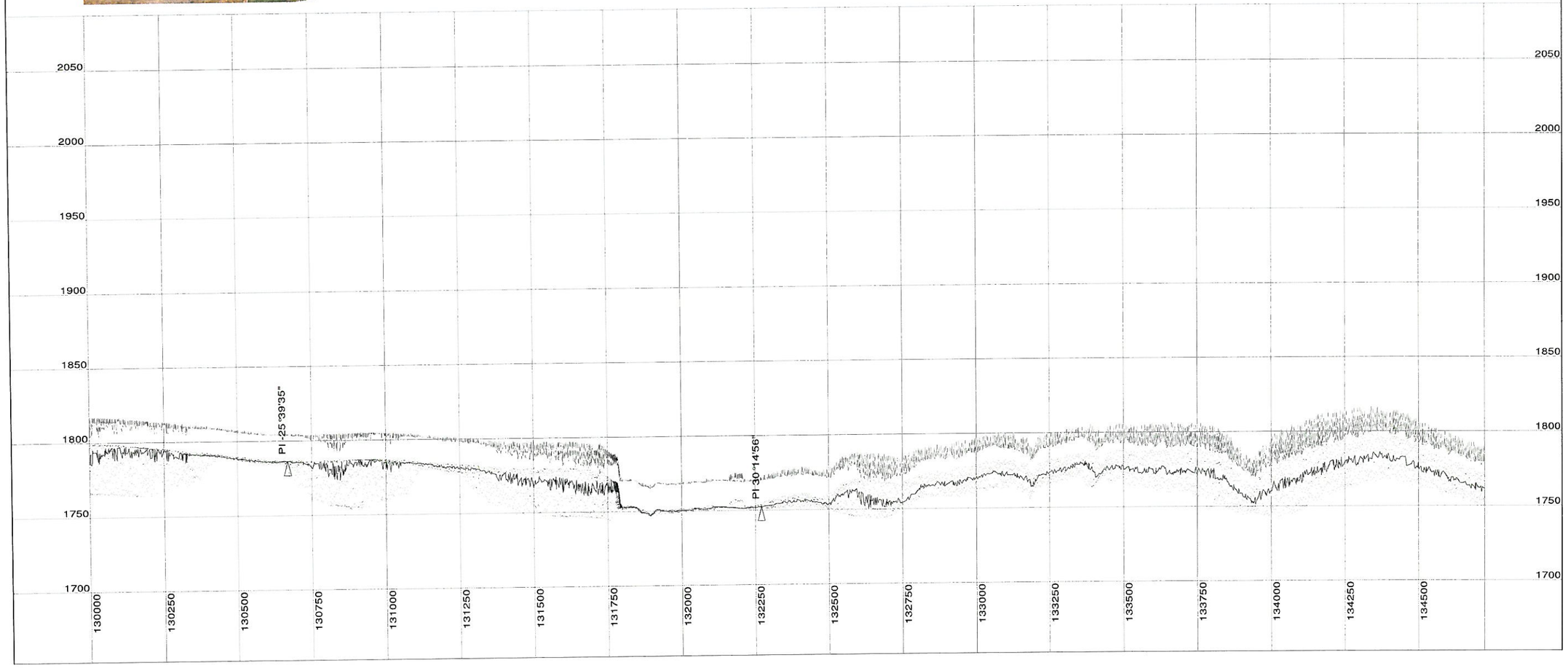

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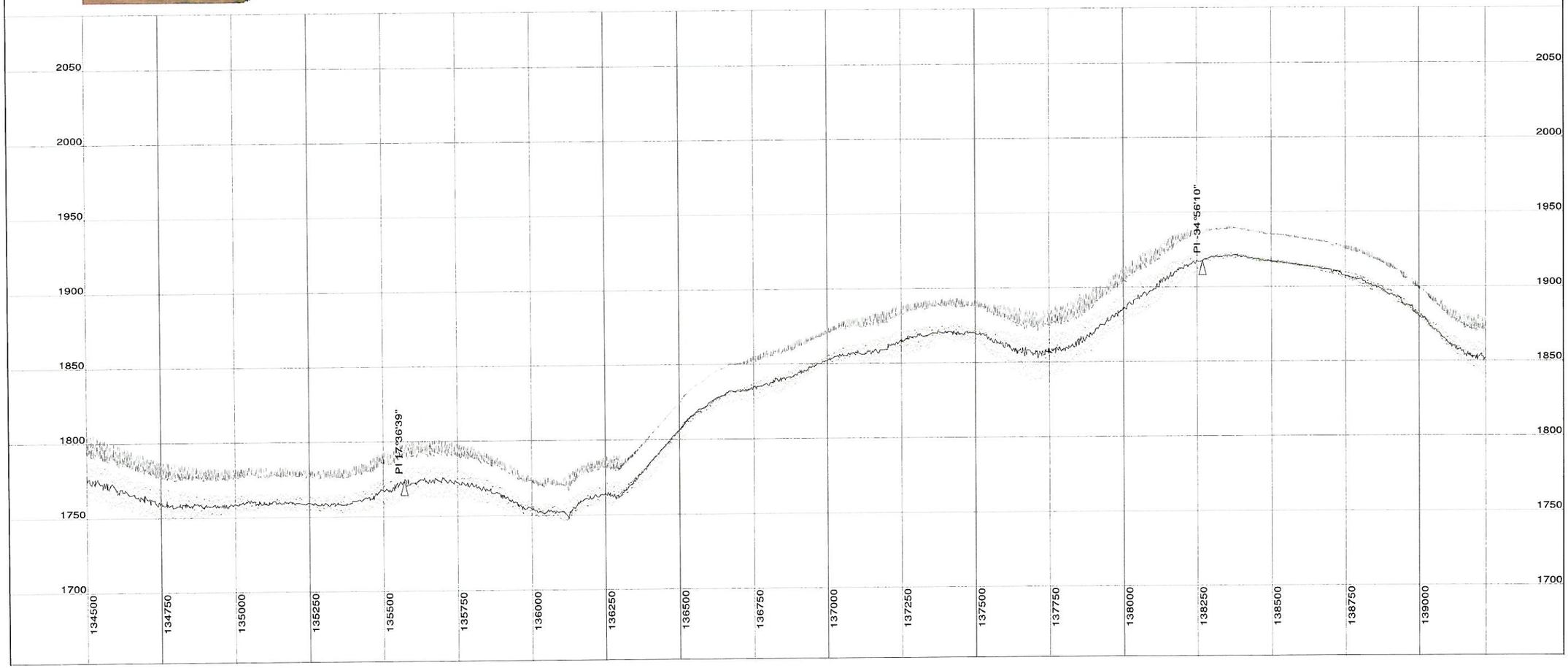

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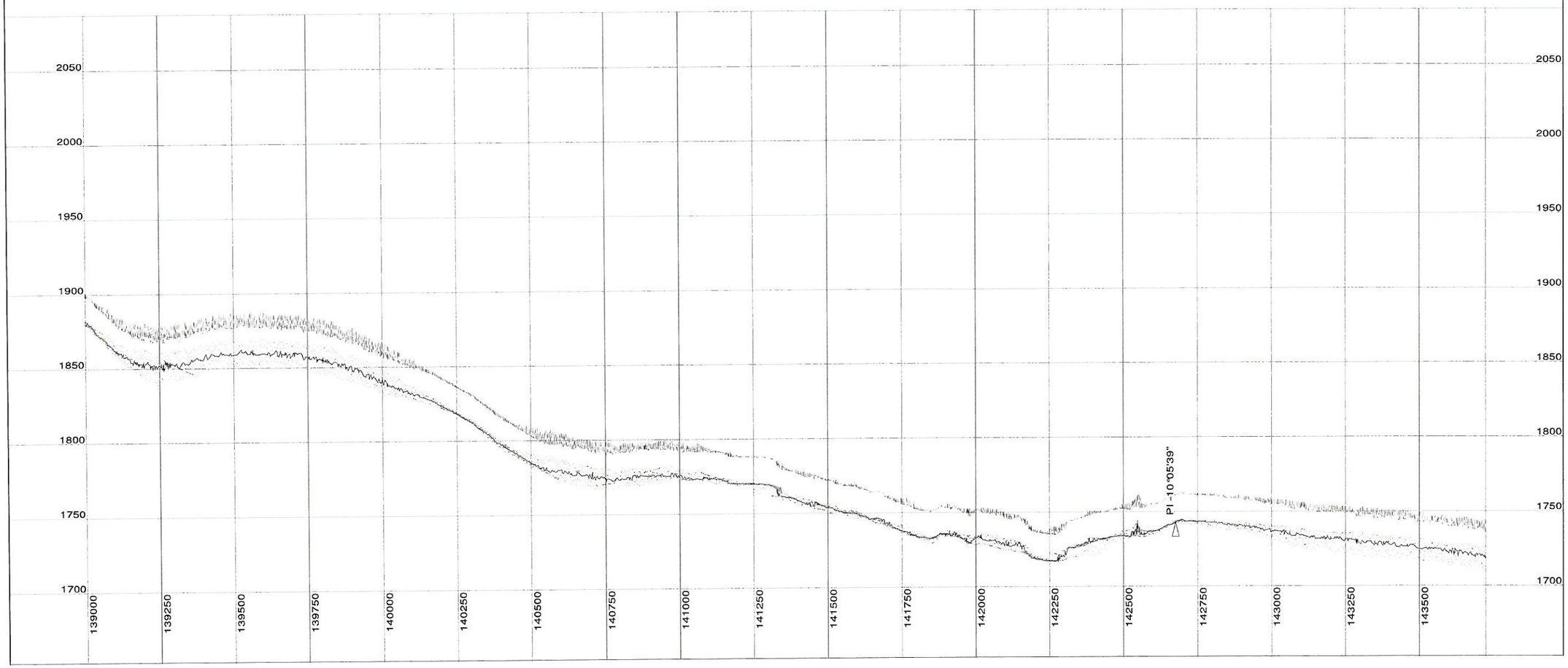

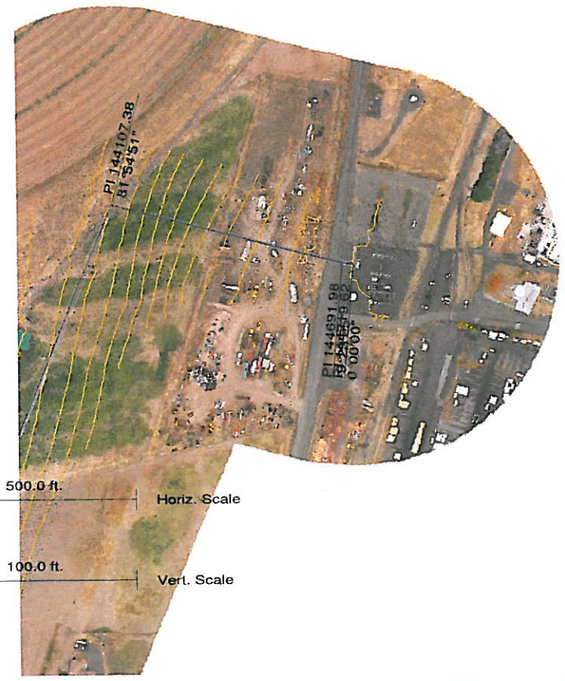

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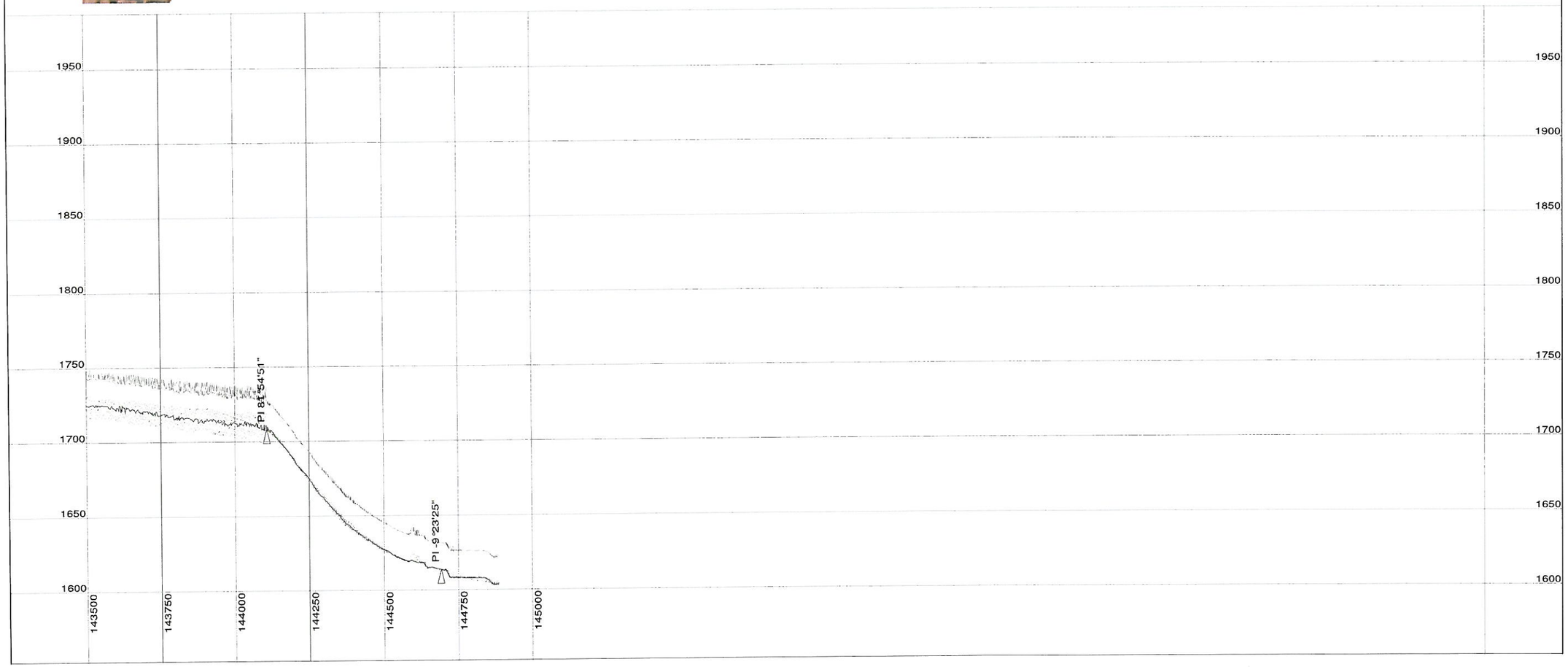

APPENDIX B

PHOTOPLATES 1-3

Photo 1

Photo showing transmission lines extending over grass-steppe habitat.

Photo 2

Photo showing transmission lines extending over agriculture land.

ECOLOGICAL LAND SERVICES, INC.
1157 3rd Ave., Suite 220 Longview, WA 98632
(360) 578-1371 Fax: (360) 414-9305

DATE: 2/1/08
DWN: CB
REQ. BY: MLM
PRJ. MGR: TH
CHK: MMM
APPR:
PROJ.#: 1561.02

Photoplate 1
SITE PHOTOS
Columbia Power Cooperative Association
Transmission Line Upgrade
Brown & Kysar, Inc.
Umatilla County, Oregon

Photo 3

Photo of Birch Creek's dry creek bed.

Photo 4

Photo showing transmission poles spanning wetland.

ECOLOGICAL LAND SERVICES, INC.
1157 3rd Ave., Suite 220 Longview, WA 98632
(360) 578-1371 Fax: (360) 414-9305

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DWN: CB
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APPR:
PROJ.#: 1561.02

Photoplate 2
SITE PHOTOS
Columbia Power Cooperative Association
Transmission Line Upgrade
Brown & Kysar, Inc.
Umatilla County, Oregon

Photo 5

Photo showing transmission lines extending through a portion of Umatilla National Forest.

Photo 6

Photo showing transmission lines extending through open range land.

ECOLOGICAL LAND SERVICES, INC.
1157 3rd Ave., Suite 220 Longview, WA 98632
(360) 578-1371 Fax: (360) 414-9305

DATE: 2/1/08
DWN: CB
REQ. BY: MLM
PRJ. MGR: TH
CHK: MMM
APPR:
PROJ.#: 1561.02

Photoplate 3
SITE PHOTOS
Columbia Power Cooperative Association
Transmission Line Upgrade
Brown & Kysar, Inc.
Umatilla County, Oregon

APPENDIX C

U.S. FISH AND WILDLIFE SERVICE, LETTER DATED AUGUST 13, 2007

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Bend Field Office
20310 Empire Ave, Ste A-100
Bend, Oregon 97701
(541) 383-7146 FAX: (541) 383-7638

File Number: 7675.003(07)
File Name. Columbia Power Coop Transm Line Upgrade Aug07.doc
Tracking Number: 07-2189 and 07-361
TAILS: 13420-2007-FA-0152

August 13, 2007

Mr. Timothy J. Haderly
Ecological Land Services, Inc.
1157 3rd Ave., Suite 220
Longview, WA 98632

Subject: Request for Information – Proposed Fossil to Service Creek and Pilot Rock to Ukiah Electric Transmission Line Upgrade, Wheeler and Umatilla Counties, Oregon

Dear Mr. Haderly:

The U.S. Fish and Wildlife Service (Service) has reviewed the Columbia Power Cooperative Association (Cooperative) request for information in order to assess the environmental impacts of proposed upgrades to two separate electric transmission lines within Wheeler and Umatilla Counties. The Fossil to Service Creek transmission line (approximately 25 miles) serves the Kinzua, Service Creek and Spray substations. The Pilot Rock to Ukiah (approximately 27 miles) serves the Ukiah substation. Proposed upgrades to the system includes: 1) replacing the existing lines with higher capacity insulated line; 2) replacing the existing poles with new treated fir poles; and 3) installing new polymer insulators. It is proposed that both line upgrades will be constructed parallel to the existing corridor without having to de-energize the system.

The Service provided comments on the Cooperative's 2007 – 2010 Construction Program to Mr. Rex D. Brown, Brown & Kysar, Inc. on December 5, 2006. Our comments in this previous letter to the Cooperative mirror the comments in this letter. We appreciate the opportunity to provide comments, and we look forward to working with you on this important project.

The Service's primary concern with the proposed project is the potential for avian mortality and injury resulting from collision and electrocution. We place a high priority on proactively working with companies to avoid and reduce impacts such as electrocutions and line strikes to migratory birds. We would like to work together with the Cooperative to help protect migratory birds and reduce the incidence of bird mortalities.

The Migratory Bird Treaty Act (MBTA) (Title 16, United States Code, Sections 703-712) prohibits the killing of migratory birds in any manner except when specifically authorized through a valid permit. In addition, the MBTA requires a migratory bird permit for the possession of any part of a migratory bird and their nests. Enclosed is a list of the federal migratory birds (50 CFR, Part 10). Please contact Ms. Tami Tate-Hall (phone: 503-872-2715) to apply for a migratory bird permit. This permit will provide authorization for the temporary possession and/or disposal of migratory birds injured or killed by utility structures. In addition, this permit will require a yearly report documenting the number of migratory bird electrocutions, the reporting of any electrocuted eagles, and raptor prevention devices or improvements completed by the Cooperative.

The project area which includes transmission lines along the John Day River and its tributaries, are known to be used by resident and wintering bald eagles. Bald eagles receive additional protection under the Endangered Species Act and the Bald and Golden Eagle Protection Act (Title 16, United States Code, Sections 668-668d). We are available to work with you to avoid impacts to bald and golden eagles. The Service recommends that the Cooperative develop an Avian Protection Plan (APP) which will reduce migratory bird electrocution and impacts to your electric installations. To assist you in developing a plan we have provided you the APP guidelines as an attachment.

The Service recognizes that the Cooperative has likely installed a number of raptor protection devices in the course of normal business, including specific device and wiring effectiveness for protecting raptors from electrocutions. An APP can document these actions while benefiting utilities and wildlife resources through reduced long-term costs, improved reliability, avian protection, legal compliance, and positive relations between agencies and customers.

The Service recommends that all new and upgraded construction be installed raptor-safe. Although generally included in an APP, the Service recommends the following: 1) identify within the utility area where pole configuration(s) present a current electrocution risk; 2) describe specific steps that have been taken, or are planned for the future to reduce or remove the threat of electrocution to raptors in high and low risk areas; and 3) describe existing opportunities to further reduce the risk of raptor electrocutions, in order to reduce the cost of prevention; (e.g. using routine inspection and maintenance visits to install raptor protection devices on low and high risk configuration poles).

We also recommend monitoring raptor-safe configurations in high risk areas and low risk areas. Periodic inspections to identify areas of concern and report on the installation, efficacy of design, and degradation in the field of whatever bird protection devices are employed (according to published literature on avian power line electrocution, field observations indicate a significant

number of bird protection devices are incompletely or improperly installed and may degrade in the field).

The Service appreciates the opportunity to provide comment on the Cooperative's proposed upgrades. We would like to work with you to further protect fish and wildlife resources within the utility area. If you have any questions regarding the Service's comments, please contact Jerry Cordova or me at the Bend Fish and Wildlife Office at 541-383-7146.

Sincerely,

Nancy Gilbert

Nancy Gilbert
Field Supervisor

cc:
Mike Green, USFWS Region 1, Portland, OR.
Estyn Mead, USFWS Region 1, Portland, OR.
Todd Eckhardt, USFWS Region 1, Klamath Falls, OR.
Chris Carey, ODFW, Bend, OR
Tami Tate-Hall, USFWS Region 1, Portland, OR

References

Avian Power Interaction Committee (APLIC). 2006. Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006. Edison Electric Institute, APLIC, and the California Energy Commission. Washington, D.C. and Sacramento, CA. 207pp. Additional copies of this book may be obtained through: www.aplic.org

Avian Protection Plan (APP) Guidelines. April 2005. Edison Electric Institute's Avian Power Line Interaction Committee and U.S. Fish and Wildlife Service. 84pp.

APPENDIX D

U.S. FISH AND WILDLIFE SERVICE, LETTER DATED JULY 10, 2007

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Oregon Fish and Wildlife Office
2600 SE 98th Avenue, Suite 100
Portland, Oregon 97266
Phone: (503)231-6179 FAX: (503)231-6195

Reply To: 8330.SP07(07)

July 10, 2007

Timothy J. Haderly
Ecological Land Services, Inc.
1157 3rd Ave., Suite 220
Longview, WA 98632

Subject: Columbia Power Cooperative Association Fossil to Service Creek/Pilot Rock to Yukia Transmission Line Upgrade Project
USFWS Reference # AA1D2B7B24EE5E9F8825731500038F51

Dear Mr. Timothy J. Haderly:

This is in response to your request, dated July 10, 2007, requesting information on listed and proposed endangered and threatened species that may be present within the area of the Columbia Power Cooperative Association Fossil to Service Creek/Pilot Rock to Yukia Transmission Line Upgrade Project in Umatilla, Wheeler County(s). The Fish and Wildlife Service (Service) received your correspondence on July 10, 2007.

We have attached a list (Enclosure A) of threatened and endangered species that may occur within the area of the Columbia Power Cooperative Association Fossil to Service Creek/Pilot Rock to Yukia Transmission Line Upgrade Project. The list fulfills the requirement of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*). U.S. Department of Agriculture requirements under the Act are outlined in Enclosure B.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems on which they depend may be conserved. Under section 7(a)(1) and 7(a)(2) of the Act and pursuant to 50 CFR 402 *et seq.*, the U.S. Department of Agriculture is required to utilize their authorities to carry out programs which further species conservation and to determine whether projects may affect threatened and endangered species, and/or critical habitat. A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) which are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA) (42 U.S.C. 4332 (2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to the Biological Assessment be prepared to determine whether they may affect listed and proposed species. Recommended contents of a Biological Assessment are described in Enclosure B, as well as 50 CFR 402.12.

If the U.S. Department of Agriculture determines, based on the Biological Assessment or evaluation, that threatened and endangered species and/or critical habitat may be affected by the project, the U.S. Department of Agriculture is required to consult with the Service following the requirements of 50 CFR 402 which implement the Act.

Enclosure A includes a list of candidate species under review for listing. The list reflects changes to the candidate species list published May 11, 2005, in the Federal Register (Vol. 69, No. 86, 24876) and the addition of "species of concern." Candidate species have no protection under the Act but are included for consideration as it is possible candidates could be listed prior to project completion. Species of concern are those taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

If a proposed project may affect only candidate species or species of concern, the U.S. Department of Agriculture is not required to perform a Biological Assessment or evaluation or consult with the Service. However, the Service recommends minimizing impacts to these species to the extent possible in order to prevent potential future conflicts. Therefore, if early evaluation of the project indicates that it is likely to adversely impact a candidate species or species of concern, the U.S. Department of Agriculture may wish to request technical assistance from this office.

Your interest in endangered species is appreciated. The Service encourages the U.S. Department of Agriculture to investigate opportunities for incorporating conservation of threatened and endangered species into project planning processes as a means of complying with the Act. If you have questions regarding your responsibilities under the Act, please contact Kevin Maurice at (503) 231-6179. All correspondence should include the above referenced file number. For questions regarding salmon and steelhead trout, please contact NOAA Fisheries Service, 525 NE Oregon Street, Suite 500, Portland, Oregon 97232, (503) 230-5400.

For future species list requests, please visit our website (http://www.fws.gov/oregonfwo/Species/default.asp) for instructions on how to make requests.

Enclosures
EnclosureA: Umatilla.PDF, Wheeler COUNTY.PDF
EnclosureB: EnclosureB_Federal_Agencies_Responsibilities.PDF

FEDERALLY LISTED THREATENED, ENDANGERED, PROPOSED, CANDIDATE SPECIES AND SPECIES OF CONCERN WHICH MAY OCCUR WITHIN UMATILLA COUNTY, OREGON

LISTED SPECIES[1]

Birds		
Bald eagle[2]	*Haliaeetus leucocephalus*	T
Fish		
Steelhead (Snake River Basin)[3]	*Oncorhynchus mykiss* ssp.	T*
Steelhead (Middle Columbia River)[4]	*Oncorhynchus mykiss* ssp.	T*
Steelhead (Upper Columbia River)[5]	*Oncorhynchus mykiss* ssp.	E*
Sockeye salmon (Snake River)[6]	*Oncorhynchus nerka*	CH E*
Chinook salmon (Upper Columbia River)[7]	*Oncorhynchus tshawytscha*	E*
Chinook salmon (Snake River)[8]	*Oncorhynchus tshawytscha*	CH T*
Bull trout (Columbia River Basin)[9]	*Salvelinus confluentus*	CH T

PROPOSED SPECIES

None

CANDIDATE SPECIES[10]

Mammals	
Washington ground squirrel	*Spermophilus washingtoni*
Birds	
Yellow-billed cuckoo	*Coccyzus americanus*
Amphibians and Reptiles	
Columbia spotted frog	*Rana luteiventris*
Plants	
Northern wormwood	*Artemisia campestris* var. *wormskioldii*

SPECIES OF CONCERN

Mammals	
Pale western big-eared bat	*Corynorhinus townsendii pallescens*
California wolverine	*Gulo gulo luteus*
Silver-haired bat	*Lasionycteris noctivagans*
Small-footed myotis (bat)	*Myotis ciliolabrum*
Long-eared myotis (bat)	*Myotis evotis*
Fringed myotis (bat)	*Myotis thysanodes*
Long-legged myotis (bat)	*Myotis volans*
Yuma myotis (bat)	*Myotis yumanensis*
Preble's shrew	*Sorex preblei*
Birds	
Northern goshawk	*Accipiter gentilis*
Tricolored blackbird	*Agelaius tricolor*
Western burrowing owl	*Athene cunicularia hypugea*
Upland sandpiper	*Bartramia longicauda*

Ferruginous hawk	*Buteo regalis*
Olive-sided flycatcher	*Contopus cooperi*
Willow flycatcher	*Empidonax trailli adastus*
Yellow-breasted chat	*Icteria virens*
Lewis' woodpecker	*Melanerpes lewis*
Mountain quail	*Oreortyx pictus*
White-headed woodpecker	*Picoides albolarvatus*
Amphibians and Reptiles	
Northern sagebrush lizard	*Sceloporus graciosus graciosus*
Fishes	
Margined sculpin	*Cottus marginatus*
Pacific lamprey	*Lampetra tridentata*
Interior redband trout	*Oncorhynchus mykiss gibbsi*
Plants	
Wallowa ricegrass	*Achnatherum wallowaensis*
Blue Mountain onion	*Allium dictuon*
Robinson's onion	*Allium robinsonii*
Laurence's milk-vetch	*Astragalus collinus* var. *laurentii*
Stalked moonwort	*Botrychium pedunculosum*
Dwarf evening-primrose	*Camissonia pygmaea*
Disappearing monkeyflower	*Mimulus evanescens*
Little mousetail	*Myosurus minimus* ssp. *apus* (= var. *sessiliflorus*)
Oregon semaphore grass	*Pleuropogon oregonus*
Douglas clover	*Trifolium douglasii*

(E) - Listed Endangered *(T) - Listed Threatened* *(CH) - Critical Habitat has been designated for this species*
(PE) - Proposed Endangered *(PT) - Proposed Threatened* *(PCH) - Critical Habitat has been proposed for this species*

Species of Concern - Taxa whose conservation status is of concern to the Service (many previously known as Category 2 candidates), but for which further information is still needed.

* *Consultation with NOAA's National Marine Fisheries Service may be required.*

[1] *U.S. Department of Interior, Fish and Wildlife Service, October 31, 2000. Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12*
[2] *Federal Register Vol. 60, No. 133, July 12, 1995, - Final Rule - Bald Eagle*
[3] *Federal Register Vol. 62, No. 159, August 18, 1997, Final Rule - Snake River Steelhead*
[4] *Federal Register Vol. 64, No. 57, March 25, 1999, Final Rule - Middle Columbia and Upper Willamette River Steelhead*
[5] *Federal Register Vol. 62, No. 159, August 18, 1997, Final Rule – Upper Columbia River Steelhead*
[6] *Federal Register Vol. 56, No. 224, November 20, 1991, Final Rule - Snake River Sockeye Salmon*
[7] *Federal Register Vol. 64, No. 56, March 24, 1999, Final Rule - West Coast Chinook Salmon*
[8] *Federal Register Vol. 57, No. 78, April 22, 1992, Final Rule – Snake River Chinook Salmon*
[9] *Federal Register Vol. 63, No. 111, June 10, 1998, Final Rule - Columbia River and Klamath River Bull Trout*
[10] *Federal Register Vol. 69, No. 86, May 4, 2004, Notice of Review - Candidate or Proposed Animals and Plants*

ENCLOSURE A

FEDERALLY LISTED THREATENED, ENDANGERED, PROPOSED, CANDIDATE SPECIES AND SPECIES OF CONCERN WHICH MAY OCCUR WITHIN WHEELER COUNTY, OREGON

LISTED SPECIES[1/]		
Birds		
Bald eagle[2/]	*Haliaeetus leucocephalus*	T
Fish		
Steelhead (Middle Columbia River)[3/]	*Oncorhynchus mykiss* ssp.	T*
PROPOSED SPECIES		
None		
CANDIDATE SPECIES[4/]		
Birds		
Yellow-billed cuckoo	*Coccyzus americanus*	
Amphibians and Reptiles		
Columbia spotted frog	*Rana luteiventris*	
SPECIES OF CONCERN		
Mammals		
Pygmy rabbit	*Brachylagus idahoensis*	
Pale western big-eared bat	*Corynorhinus townsendii pallescens*	
Spotted bat	*Euderma maculatum*	
California wolverine	*Gulo gulo luteus*	
Silver-haired bat	*Lasionycteris noctivagans*	
Small-footed myotis (bat)	*Myotis ciliolabrum*	
Long-eared myotis (bat)	*Myotis evotis*	
Fringed myotis (bat)	*Myotis thysanodes*	
Long-legged myotis (bat)	*Myotis volans*	
Yuma myotis (bat)	*Myotis yumanensis*	
California bighorn	*Ovis canadensis californiana*	
Birds		
Northern goshawk	*Accipiter gentilis*	
Tricolored blackbird	*Agelaius tricolor*	
Western burrowing owl	*Athene cunicularia hypugea*	
Ferruginous hawk	*Buteo regalis*	
Olive-sided flycatcher	*Contopus cooperi*	
Willow flycatcher	*Empidonax trailli adastus*	
Yellow-breasted chat	*Icteria virens*	
Lewis' woodpecker	*Melanerpes lewis*	
Mountain quail	*Oreortyx pictus*	
White-headed woodpecker	*Picoides albolarvatus*	
Amphibians and Reptiles		
Tailed frog	*Ascaphus truei*	
Northern sagebrush lizard	*Sceloporus graciosus graciosus*	

Fishes

Pacific lamprey	*Lampetra tridentata*
Interior redband trout	*Oncorhynchus mykiss gibbsi*

Plants

Wallowa ricegrass	*Achnatherum wallowaensis*
Upward-lobed moonwort	*Botrychium ascendens*
Crenulate grape-fern	*Botrychium crenulatum*
Mountain grape-fern	*Botrychium montanum*
Twin spike moonwort	*Botrychium paradoxum*
Peck's mariposa-lily	*Calochortus longebarbatus* var. *peckii*
Dwarf evening-primrose	*Camissonia pygmaea*
Little mousetail	*Myosurus minimus* ssp. *apus* (= var. *sessiliflorus*)
Oregon semaphore grass	*Pleuropogon oregonus*
Arrow-leaf thelypody	*Thelypodium eucosmum*

(E) - Listed Endangered *(T) - Listed Threatened* *(CH) - Critical Habitat has been designated for this species*
(PE) - Proposed Endangered *(PT) - Proposed Threatened* *(PCH) - Critical Habitat has been proposed for this species*

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[1] *U.S. Department of Interior, Fish and Wildlife Service, October 31, 2000, Endangered and Threatened Wildlife and Plants, 50 CFR 17.11 and 17.12*
[2] *Federal Register Vol. 60, No. 133, July 12, 1995, - Final Rule - Bald Eagle*
[3] *Federal Register Vol. 64, No. 57, March 25, 1999, Final Rule - Middle Columbia and Upper Willamette River Steelhead*
[4] *Federal Register Vol. 69, No. 86, May 4, 2004, Notice of Review - Candidate or Proposed Animals and Plants*

ENCLOSURE B

FEDERAL AGENCIES RESPONSIBILITIES UNDER SECTION 7(a) and (c)
OF THE ENDANGERED SPECIES ACT

SECTION 7(a)-Consultation/Conference

Requires: 1) Federal agencies to utilize their authorities to carry out programs to conserve endangered and threatened species;

2) Consultation with FWS when a Federal action may affect a listed endangered or Threatened species to insure that any action authorized, funded or carried out by a Federal agency is not likely to jeopardize the continued existence of listed species or result in the destruction or adverse modification of Critical Habitat. The process is initiated by the Federal agency after they have determined if their action may affect (adversely or beneficially) a listed species; and

3) Conference with FWS when a Federal action is likely to jeopardize the continued existence of a proposed species or result in destruction or adverse modification of proposed Critical Habitat.

SECTION 7(c)-Biological Assessment for Major Construction Projects[1]

Requires Federal agencies or their designees to prepare a Biological Assessment (BA) for construction projects only. The purpose of the BA is to identify proposed and/or listed species which are/is likely to be affected by a construction project. The process is initiated by a Federal agency in requesting a list of proposed and listed threatened and endangered species (list attached). The BA should be completed within 180 days after its initiation (or within such a time period as is mutually agreeable). If the BA is not initiated within 90 days of receipt of the species list, the accuracy of the species list should be informally verified with our Service. No irreversible commitment of resources is to be made during the BA process which would foreclose reasonable and prudent alternatives to protect endangered species. Planning, design, and administrative actions may be taken; however, no construction may begin.

To complete the BA, your agency or its designee should: (1) conduct an on-site inspection of the area to be affected by the proposal which may include a detailed survey of the area to determine if any species are present and whether suitable habitat exists for either expanding existing populations or for potential reintroduction of species; (2) review literature and scientific data to determine species distribution(s), habitat needs, and other biological requirements; (3) interview experts including those within FWS, National Marine Fisheries Service, State conservation departments, universities, and others who may have data not yet published in scientific literature; (4) review and analyze the effects of the proposal on the species present in terms of effects to individuals and populations, including consideration of cumulative effects to the species and habitat; (5) analyze alternative actions that may provide conservation measures and (6) prepare a report documenting the results, including a discussion of study methods used, any problems encountered, and other relevant information. The BA should conclude whether or not any listed species will be affected. Upon completion, the report should be forwarded to our Portland Office at 2600 SE 98th Ave., Suite 100, Portland, Oregon, 97266.

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[1]A construction project (or other undertaking having similar physical impacts) which is a major Federal action significantly affecting the quality of the human environment as referred to in NEPA (42 U.S.C. 4332. (2)c). On projects other that construction, it is suggested that a biological evaluation similar to the biological assessment be undertaken to conserve species influenced by the Endangered Species Act.

APPENDIX E

OREGON DEPARTMENT OF FISH AND WILDLIFE, LETTER DATED JULY 16, 2007

Oregon
Theodore R. Kulongoski, Governor

Department of Fish and Wildlife
Heppner District Office
PO Box 363
54173 Hwy. 74
Heppner, OR 97836
(541) 676-5230
FAX (541) 676-9075

July 16, 2007

Ecological Land Services, Inc.
Timothy J. Haderly
1157 – 3rd Ave., Suite 220
Longview, WA 98632

Dear Mr. Haderly:

This letter is in regards to the request for information you sent to the Oregon Department of Fish and Wildlife concerning a proposed electric transmission line upgrade from Fossil to Service Creek. I have reviewed the proposed activities that occur in Wheeler County, which is my jurisdiction, and do not have any major concerns. However, I would like to take this opportunity to request that we try to minimize activities around active raptor nests during the nesting period if possible.

As I mentioned before I have only reviewed the activities planned in Wheeler County. Mark Kirsh from our Pendleton office (phone: 541-276-2344, address: 73471 Mytinger Lane, Pendleton, OR 97801) is the contact who reviews planned activities in Umatilla County.

Respectfully,

Shannon Jewett
Assistant District Wildlife Biologist

APPENDIX F

OREGON PARKS AND RECREATION DEPARTMENT, LETTER DATED JULY 10, 2007

Oregon
Theodore R. Kulongoski, Governor

Parks and Recreation Department
State Historic Preservation Office
725 Summer St. NE, Suite C
Salem, OR 97301-1266
(503) 986-0707
FAX (503) 986-0793
www.hcd.state.or.us

Nature HISTORY Discovery

July 10, 2007

Mr. Timothy Haderly
Ecological Land Services Inc
1157 3rd Ave STE 220
Longview, WA 98632

RE: SHPO Case No. 07-1530
Fossil to Service Crk and Pilot Rock to Ukiah Trans Lines Project
Upgrade of transmission lines
Ecological Land Services Inc/CPCA/RUS
Wheeler/Umatilla County

Dear Mr. Haderly:

Our office recently received a request to conduct a cultural resource review for the area of the project referenced above. In checking our statewide cultural resource database, I find that there have been no previous cultural surveys completed within the proposed project area but cultural sites are known to exist in the surrounding area. The project area is located on a landform generally perceived to have a high probability for possessing archaeological sites and buried human remains.

While not having sufficient knowledge to pinpoint the exact location of cultural resources within the proposed project area, due to the very high likelihood of significant sites being present, I suggest that the applicant contact a qualified archaeologist to conduct a cultural resource survey of the project area. A list of possible archaeological consultants can be found on our web site (www.oregonheritage.org) by clicking on Archaeological Services web page and highlighting the section marked Archaeological Permits.

State statutes (ORS 358.905 and ORS 97.740) provide protection for archaeological sites, objects, and human remains on both state public and private lands in Oregon. I hope that by providing the above-suggested archaeological survey, damage to any archaeological sites in the area of your proposed project can be avoided.

If you have any questions about the above comments or would like additional information, please feel to contact me at your convenience. In order to help us track your project accurately, please be sure to reference the SHPO case number above in all correspondence.

Dennis Griffin

Dennis Griffin, Ph.D., RPA
State Archaeologist
(503) 986-0674
dennis.griffin@state.or.us

APPENDIX G

OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY, LETTER DATED AUGUST 3, 2007

Oregon
Theodore R. Kulongoski, Governor

Department of Environmental Quality
Eastern Region
700 SE Emigrant
Suite 330
Pendleton, OR 97801
(541) 276-4063 Voice/TTY
FAX (541) 278-0168

Timothy J. Haderly
Project Manager/Ecologist
Ecological Land Services, Inc
1157 3rd Avenue, Suite 220
Longview, Washington 98632

August 3, 2007

Re: Request for Information
Transmission Line Upgrade

Dear Mr. Haderly:

This is in response to your July 6, 2007 letter addressed to DEQ Pendleton Office. Your letter requests assistance in identifying, among other things, environmental issues that could affect a project to upgrade transmission lines between Fossil and Service Creek and between Pilot Rock and Ukiah. In response I can offer the following:

Depending on how much land is disturbed at a time a Construction Stormwater permit may be required. Information on how to apply for such a permit can be obtained off the DEQ web site or by calling this office.

Lines, poles, and insulators need to be either recycled or properly disposed of at a permitted facility. If transformers are also being replaced then it must be determined whether the old transformers contain PCB's. If so then they must be properly disposed of. Spent treated power poles can be managed as follows:

Reuse- as landscaping or other continued use- No action required except use them appropriately.

Disposal- In the event that the poles will be <u>disposed.</u>

- No burning allowed
- They will need to select a pole that is representative of the lot and collect a sawdust sample and run TCLP for metals and Penta to determine if the spent poles would be classified as a HW. (Most likely not, but they should have some data to support their conclusion as to how they characterize the poles as a solid waste).
- If the spent poles are Non- HW then as treated wood, it must go to a sub-title D land fill (lined solid waste) for disposal.

- If for some reason the TCLP testing were to classify the Poles as a HW, then it would need to go to a sub-title C facility such as Arlington for disposal.

Feel free to contact any DEQ HW staff for questions related to spent pole management.

For underground storage tanks and cleanup site identification, you can search our database via facility profiler at the link below. You will be able to compare your actual route with known, contaminated sites. If you identify sites which overlap with the lines, and the data base does not contain sufficient information to answer your questions, we could arrange for you to review the files or speak to the project manager, if one is actively working on the site.

http://deq12.deq.state.or.us/fp20/

I hope the information provide here is helpful. Your information request is quite broad. If you have additional questions feel free to call this office at 541 276-4063 and explain to the support staff person the nature of your questions. Your call can then be routed to the appropriate program manager or staff person.

Sincerely,

D. Mitch Wolgamott

D. Mitch Wolgamott
Water Quality Manager

APPENDIX H

OREGON DEPARTMENT OF STATE LANDS, LETTER DATED JULY 14, 2007

Oregon
Theodore R. Kulongoski, Governor

Department of State Lands
1645 NE Forbes Rd., Suite 112
Bend, OR 97701
(541) 388-6112
FAX (541) 388-6480
www.oregonstatelands.us.

July 14, 2007

Ecological Land Services, Inc.
Attn: Timothy J. Haderly
1157 3rd Ave., Suite 220
Longview, WA 98632

RE: Request for Information – Proposed Fossil to Service Creek and Pilot Rock to Ukiah Electric Transmission Line Upgrade.

Dear Mr. Haderly,

The Department of State Lands (DSL) has received your request for information on any environmental, historical, cultural, and other land use issues that might affect your project. Based on the maps we received we do not believe the project will affect any state owned land. However, any use of state land for this project will require an appropriate authorization. Please inform our office if there is any intention of using state owned land for this project

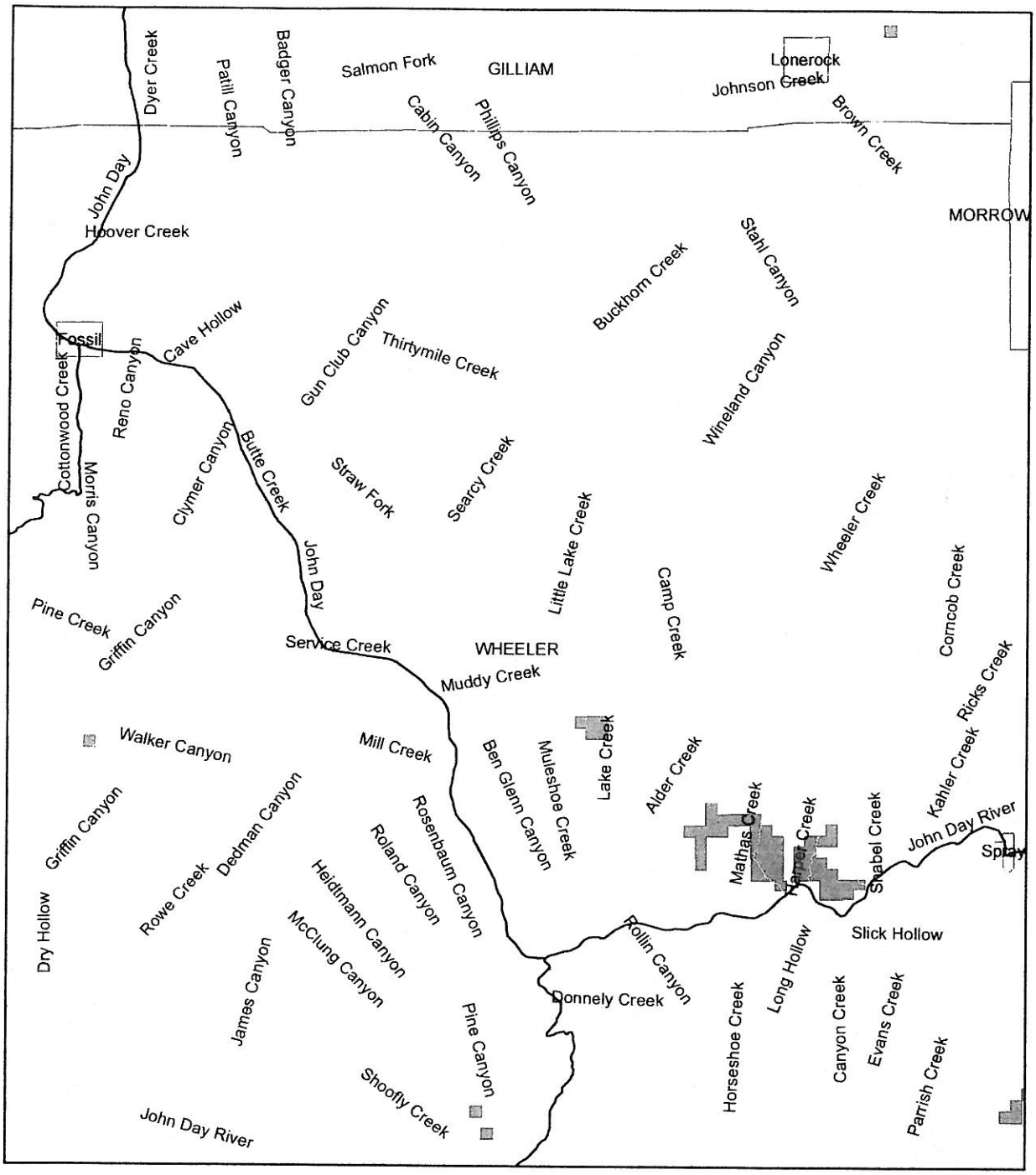
You may be able to gather both historical and cultural information from the Oregon State Parks State Historic Preservation Office (SHPO) for any state lands in the area. Also, I have attached two maps for reference of state land in relation to your project.

If you have any questions, please call me at (541) 388-6033.

Thank you,

Shawn Zumwalt
Land Specialist
Land Management Division

STATE LAND



Legend

- Highways
- State Land
- City Limits
- section
- Waterways

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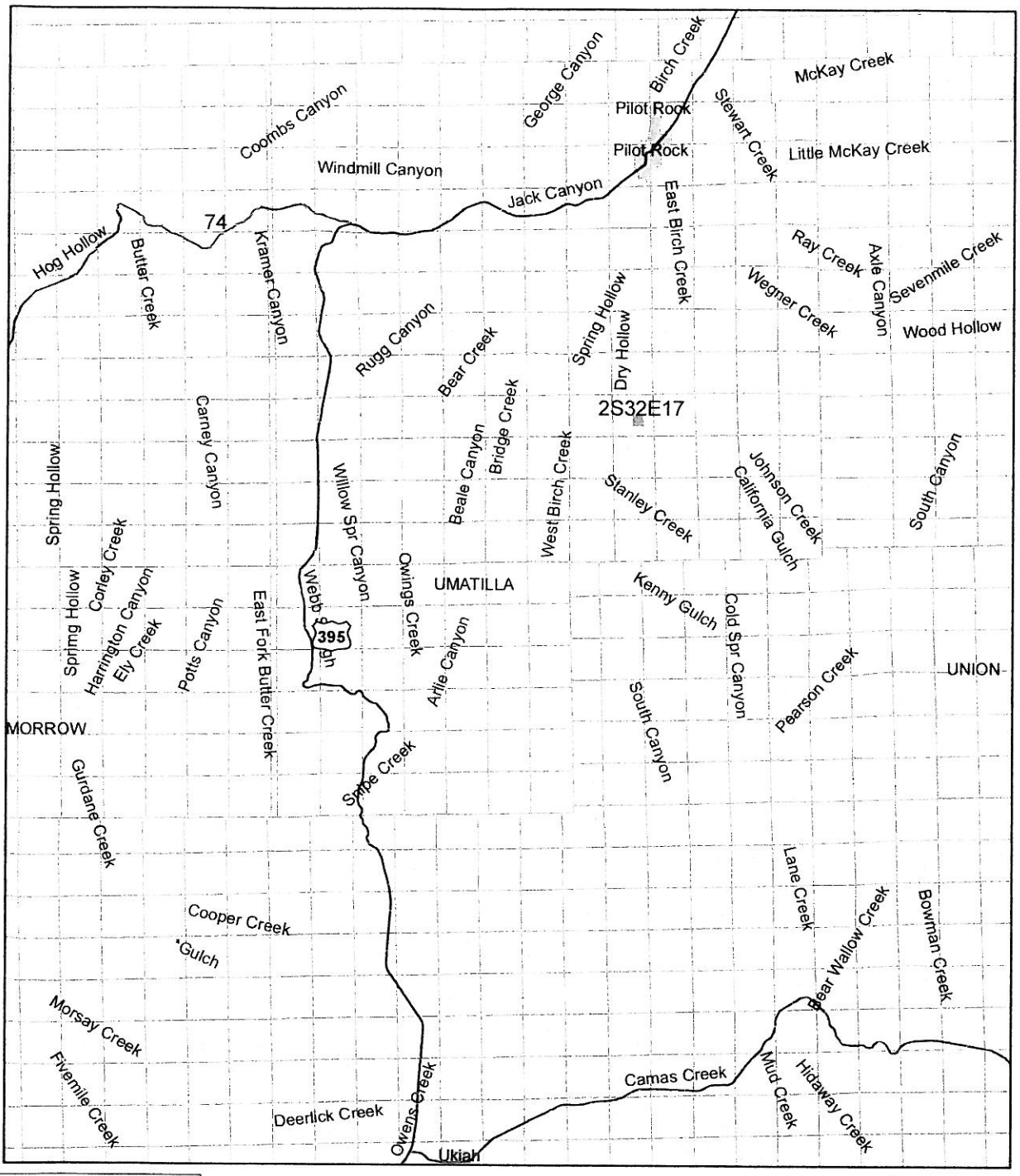
STATE OF OREGON
OREGON DEPARTMENT OF STATE LANDS
1859

State Land



Legend

- Highways
- State Land
- City Limits
- Waterway
- section

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STATE OF OREGON
OREGON DEPARTMENT OF STATE LANDS
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